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Can a luxury vehicle handle hard-core boat towing duty? We find out.

Dueling Consoles
In Pursuit of happiness, we pit a center-console against a dual console. BY JIM HENDRICKS

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The Cruisers Yachts 390 Express Coupe rocks and rolls. Photo: Tim Sharkey



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EDITOR-IN-CHIEF Kevin Falvey

DEPUTY EDITOR Pete McDonald WEST COAST EDITOR lim Hendricks

MANAGING EDITOR Sue Whitney

STAFF PHOTOGRAPHER Bill Doster

COPY EDITOR Joy Kenyon Allen

ART DIRECTOR Ryan Swanson

WEB EDITOR Brian Daugherty

BOATINGLAB DIRECTOR Randy Vance EDITOR-AT-LARGE David Seidman

CONTRIBUTORS Robert Brown, Eric Colby, Capt. Vincent Daniello,

Ken Englert, Michael Folkerts, Joe Friedman, Steve Griffin, Michael "Mick" Hannock,

Jeff Hemmel, Forest Johnson, Tom King, John Linn, Charles Plueddeman, Capt. John N. Raguso, Tim Sharkey,

Ed Sherman, John Stein, Heather Steinberger,

John Tiger Jr., Capt. John Page Williams

ILLUSTRATORS Tim Barker, Tim Bower, Colin Hayes

CORPORATE PRODUCTION DIRECTOR Jeff Cassell

GROUP PRODUCTION DIRECTOR Michelle Doster

DESIGN SERVICES DIRECTOR Suzanne Oberholtzer

GRAPHIC DESIGNERS Julia Arana, Willy Frei,

Jennifer Remias

HUMAN RESOURCES DIRECTOR Sheri Bass

GROUP PUBLISHER/BRAND DIRECTOR

Glenn Sandridge 407-571-4747; glenn.sandridge@bonniercorp.com

PUBLISHER/BRAND MANAGER

John McEver

407-571-4682; john.mcever@bonniercorp.com

NORTHEAST SALES MANAGER

Matt White

212-779-5405; matt.white@bonniercorp.com

MARKETPLACE/CLASSIFIED SALES MANAGER

Brian Luke

407-571-4788; brian.luke@bonniercorp.com

DIGITAL SALES MANAGER

Mike Staley

407-571-4803; mike.staley@bonniercorp.com

VICE PRESIDENT, DIRECTOR OF BRAND STRATEGIES Matt Hickman

EDITORIAL DIRECTOR Shawn Bean

CREATIVE DIRECTOR Jerry Pomales

CONSUMER MARKETING DIRECTOR Leigh Bingham

GROUP MARKETING DIRECTOR Haley Bischof MARKETING DIRECTOR Elaine Grime

MARKETING MANAGER Kelly MacDonald

PUBLIC RELATIONS MANAGER Robyn Sheckler

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VICE PRESIDENT, DIGITAL AUDIENCE DEVELOPMENT Jennifer Anderson

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CHIEF MARKETING OFFICER Elizabeth Burnham Murphy

GENERAL COUNSEL Jeremy Thompson





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It's Always an Adventure

EVERY DAY ON THE WATER IS DIFFERENT.

UCH OF BOATING'S appeal stems from leaving one environment and engaging with another. A leaping fish, the way the light changes, the infinite and ever-present motion — all of these are decidedly not like being on land. Our boats are, therefore, not just conveyances that float, but rather portals that transport us to another state of being. No two days on the water are the same, and to our friends and neighbors who might decry the sport as one that takes too much time, we can rally and retort, "That's the point."

Boating is rejuvenation.

Every day on the water is different. The most experienced boaters will back me up on this. And each day, therefore, holds adventure for we who slip the lines, turn the key and crease the waves with vessels great and small. Yes, there are those lucky ones among us who get to take cruises of a lifetime. They cross the oceans, do the Great Loop or simply set out for months, gunkholing their way along the coast. But boaters need not fulfill such grand ambitions in order to enjoy adventure and excitement.

Composing this editorial at my keyboard, recalling the first time I slept aboard my own boat 35 years ago, I can still experience the butterflies of anticipation that fluttered in my stomach as I headed out into the dusk of an early fall evening. My destination? Just across the bay.

Boating adventure can take many forms. The first time heading out to the other end of the lake or through the inlet constitutes adventure. So does the first time you "get up" on a slalom ski, or wakesurf, or even the first time you get to take your family out and tow them on a tube. And who could deny that anglers partake of adventure whether chasing

Each day holds adventure for we who slip the lines, turn the key and crease the waves with vessels great and small.

smallmouths or sailfish?

We boaters take our adventures for granted, sometimes, I think. Seeing the wind in ripples before it's felt; viewing the heavens doubled due to starlight reflecting on slick-calm waters; being present, to paraphrase Pamela Hansford Johnson, when the sky breaks like an egg into full sunset and the water catches fire — it's easy to forget after the first few times experiencing these events that we boaters are privileged.

Of course some adventures we might well do without, though on the whole I think many of these improve our state of being. That thunderstorm that rolls in all green and purple and loud and oozing the odor of ozone is way scarier aboard a boat than anywhere on land. But the spectacle of such a storm, the intimacy with it that comes when experienced from aboard a boat, is something that landbound folks can never experience. Nor can they enjoy the satisfaction achieved from having practiced the seamanship that brings crew and boat safely through such events.

Every day on the water is different. Every day is an adventure.

Truer words were never written.

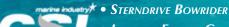
Kevin Falvey, Editor-in-Chief editor@boatingmag.com



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Making Waves



When did you realize that underwater camera work was going to be a lifelong passion?

I was working as a spearfisherman, and the sharks would come in close. I grew intrigued by them, so my brother and I got an underwater housing to document the encounters. We started creating stock footage. I was 19.

Why is free diving important for you as a cameraman? And is it true that you can hold your breath for more than five minutes?

With free diving, or breath-hold diving, you can get really close to the animals, because there are no bubbles. I can hold my breath for about 5½ minutes, going down to 150 feet. I've filmed fish at 130 feet or so. But it's really not a special ability. It just takes

practice, training and being in the water a lot.

You're well-known for your underwater work with sharks, diving and filming without a cage. Why do you think you've had such success working with these animals?

I'm a behavioral specialist. Each shark has a unique personality, and if you know that — if you know how to work with the individual animals — it makes it easier to film them. People use cages because they don't understand the sharks. But there are no guarantees. I've had a lot of close calls out there.

You're also an extreme weather cameraman — what is it like chasing hurricanes?

You've got 140-plus-mile-per-hour winds, objects flying through the air. ... You have no control. In the ocean, you don't have control either, but at least there's understanding.

You also do a lot of camera work for the marine industry. Does that work still excite and challenge you?

It's very competitive, and I like that. I'm always trying to get better. It's a challenging industry, for sure, and there are no guarantees here either. But when you have a solid team, and everyone's creative and pushing hard to do their best work, real magic can happen.

What else have you been working on recently?

We were just with Gator Boys, working on underwater alligator pickups, and we ran into these big black bears. We're also working on a new Shark Week program.

What is it about these big apex predators that continues to inspire you?

Sharks, alligators, bears, all these giant animals ... it's how I make my living, but I also really enjoy it, staying in tune with them. You're in their world, in a foreign world, and it's so exciting. It just gives you a really good feeling.

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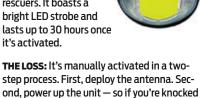
WHALER

Personal Locator Beacons

A personal locator beacon (PLB) is a smart choice to add to your onboard equipment if you're spending time far enough from shore that you can't see land. The trick is finding one that works for you. — Eric Colby

ACR ResOLink

THE FIND: At only
3.9 inches, it's one of
the smallest PLBs. It
has 66 GPS channels
and broadcasts a
406 MHz signal with
a 121.5 MHz homing
frequency to relay your
position to potential
rescuers. It boasts a
bright LED strobe and
lasts up to 30 hours once
it's activated.



out, you're out of luck. \$259.99; acrartex.com



McMurdo Fast Find 220

THE FIND: It transmits a unique ID for the user carrying it and his current GPS coordinates via the Cospas-Sarsat global search-andrescue charts, so his current position would be isolated quickly. The antenna deploys automatically, and a homing beacon and flashing SOS light draw rescue parties to his position quickly.

THE LOSS: Once activated, the battery is good for 24 hours compared with 30 for the ResQLink. The Fast Find 220 comes with a flotation pouch. Lose the pouch and you might not be found.

\$230; mcmurdomarine.com



Kannad SafeLink Solo

THE FIND: It's waterproof to 33 feet and is designed to be carried on your person at all times, thanks to its compact design.
The SafeLink Solo is programmed with 50 GPS channels and comes with a lanyard, buoyancy pouch and an additional carry pouch that can be strapped to your life jacket.



THE LOSS: It takes three steps to activate and needs the extra flotation pouch to remain buoyant, so if you lose the flotation pouch, well, you know.

\$230; kannadmarine.com

HOTO: COURTESY ACR ELECTRONICS, MCMURDO, KANNAD



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Making Waves

Captain's Test

Cruising in European Waters

Cruising or chartering in Europe sounds like a great idea, but do you know some of the differences between cruising the stateside waters and doing the same thing overseas? There are many. – *Eric Colby*

(Answers on p. 22)

Most shore-power systems in the United States are 120 volts. What is the voltage rating

in Europe?

A. 120 volts B. 240 volts

C.360 volts
D. 60 volts

2 If you're cruising the Mediterranean and want to drop anchor, how far must you stay from swimming areas?

A. 100 meters B. 500 meters C. 250 meters

D. You must remain outside the buoy line.

The boat you chartered needs 91 RON gasoline. What is the U.S. octane rating equivalent of

91 RON?

A. 87 B. 89

C. 91

D. 93

What volunteer British organization has a great website

for planning overseas cruises?

A. The Royal Yachting Association

B. The Royal Yachting Union
C. The RCC Pilotage Foundation

D. The Royal Pilotage Foundation

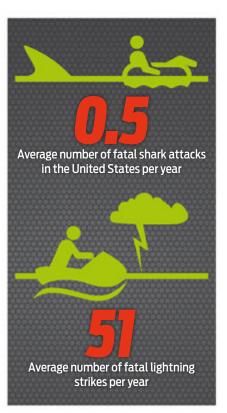
Many canals in Europe have locks. When entering a lock, where should you try to position your boat for the smoothest transition?

A. The front

B. The middle

C. The rear

D. It doesn't matter.



LLUSTRATIONS: ISTOCK PHOTO AND SHUTTERSTOCK SOURCES FOR STATISTICS: NOAA AND VARIOUS WEB SOURCES





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You're not a real cop, are you?



Can you hold my beer?



Is this a medical marijuana state?

Aren't no-wake signs just a suggestion?

Captain's Test

- B. 240 volts
- B. They're not always marked with buoys or other objects.
- A. U.S. and Canadian octane ratings are six to eight numbers lower than elsewhere in the world.
- C. The organization publishes cruising guides for most European waterways.
- C. Experts say the water is calmer here.

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Making Waves

Online This Month

March is adventure month here at *Boating*, and that means it's time to get out and explore. Not sure where to go? 1 There are six great boating adventures for you to check out at boatingmag.com/bound-boatless-man. 2 Or try making a long-distance trek on a personal watercraft. Visit boatingmag.com/pwc-touring. 3 Why not try swimming with whale sharks? Find out how at boatingmag .com/baja-california-whale-sharks.





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Seamanship By Pete McDonald



iCuidado!

THREE TIPS FOR ENTERING UNFAMILIAR HARBORS

HEN WE FIRST MOVED TO FLORIDA MY DAD USED TO take my brothers and me fishing off the breakwater at the Boca Raton Inlet. We didn't catch a lot of fish, but watching the incoming boat traffic always kept us entertained. It was, and still is, a dangerous inlet to transit because of shifting sandbars at the mouth that always seemed to catch a boater unaware. The potential for a boat to come to a grinding halt or take an unexpected surfing trip always seemed pretty high.

I think about that every time I plan to enter a new inlet or harbor. Specifically, what is out there that can get me into trouble? Here are a few things to consider when entering new waters.

Shop Local

As is the case with those shifting sandbars, not every hazard to navigation shows up on a chart. Before coming to a new inlet or harbor, plan ahead by acquiring a little local knowledge. In the 21st century, you can do this through a bit of Internet browsing, checking local boating forums, or even picking up the phone and calling a nearby harbor master. If you make the decision to explore new waters while already on the boat, hail the Coast Guard on VHF Channel 16, or check to see if your smartphone

has a signal. You can acquire some local knowledge within minutes. Many inlets along the coast also now have webcams for live-action viewing of real-time conditions.

Had half the people we watched struggle back in Boca done a little recon, they would have known those rolling swells turned into breakers at the mouth.

Follow the Leader — or Don't We've all done it, fallen in behind a boat ahead of us only to watch

that boat run aground or roam way out of the channel. The simple rule is to never assume the captain of another boat knows what he or she is doing. Certain boaters know just enough to be dangerous.

The exception to the rule would be commercial vessels. Odds are the captain of a charter fishing boat, a dive boat or a commercial fishing boat leaves and enters a local harbor on a nearly daily basis and would be keen to its guirks or any changes that happened yesterday that the recreational community might not be aware of. If you can stand down and observe how they approach, you'll quickly learn what to avoid.

Watch for Traffic

The one caveat about commercial traffic, particularly that involves harbor pilots and ships, is that they don't always see you. Firstly, they're trying to complete a job and are not necessarily paying attention to you. Secondly, in close quarters captains piloting from the helm of a large vessel might not even see you. Even with radar, in close range your vessel could be lost in his unit's main bang — the circle around every boat that does not show up on radar (with the exception of some recreational broadband units). A harbor pilot once told me that from the bridge most ships have a blind spot in front of their bow about the length of three football fields. So, even if you're looking to commercial vessels for insight, don't get too close for comfort.



THE EYES HAVE IT

Until someone figures out a way to make an app scan the water like the Terminator does (Google Glass, anyone?), you're still better off trusting your eyes. It's a must to keep a good pair of 7 x 50 binoculars close at hand. West Marine's Tahiti is a waterproof pair with a built-in range finder and compass that's reasonably priced. \$300; westmarine.com – P.M.



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The Boat Doctor

Q&ABy Michael "Mick" Hannock



ASK THE MASSES Go to boatingmag.com/forums to ask fellow boaters your questions, or to answer theirs.

Carpet Bagged

[**Q**] Hello. I read your column all the time. Your answers are very enlightening and educating. Schmooze is over. I have a question. I have a 2001 Chaparral Sunesta. The rug on the main deck area appears like new on the surface and is held on with snaps. But the rubber underside of the rug is crumbling. Is there any product that could fix the rug? Or do I have to buy a new rug?

WOLFGANG HENSEL

 $Huntingdon\ Valley,\ Pennsylvania$

[$\bf A$] Hi, Wolfgang. You buy a new rug.

To save some bucks, you could source some discount indoor-outdoor carpet "remnants." Use your existing cockpit carpet as a pattern, cut it out, and install snaps. A product made for decks and patios would probably hold up OK.

There are some DIY instructions for installing snaps at boatingmag.com/canvas-snaps.

Starting Point

[**Q**] How can I tell if my starter is going bad? I just bought a 1995 vintage sterndrive boat.

DONN CLEMENSON

Eaglewright, Ohio

[A] First off, I'll presume you checked all the connections and wires in the starting circuit, the ignition switch and starter solenoids, and that your battery is in top shape and fully charged. In fact, read about West Coast editor Jim Hendricks' experience with battery cables that had become porous at boatingmag.com/batterycables. Also, the neutral safety switch is often overlooked by DIY boaters when diagnosing starting problems. And some marine engines have both a master and slave starter solenoid.

If all of these check out, you can perform this simple "go/no-go" test to determine if your starter motor is the culprit.



Today's engines start and run so well that many boaters skip the annual spark plug changes our "foreboaters" took for granted. With spark plugs costing as much as \$20 each, it's tempting to continue to use goodlooking plugs in fine-running engines for a longer period. But worn spark plugs can place strain on your engine and ignition system. Inspect spark plugs regularly and change spark plugs at least annually.

— Kevin Falvey

- 1. Safety first: Wear eye protection, make sure the engine is in neutral and the ignition key is in the off position, and keep helpers or onlookers clear of the prop.
- **2.** Apply 12 volts directly to the S-terminal of the starter solenoid. Use a jumper wire to provide the voltage.

The starter motor should engage the engine and crank it — but not turn it over, because you have the key in the "off" position. If it does so, then you can be certain that the starter motor is good.

Flag Etiquette

Q I'd like to fly a flag from my boat's VHF antenna. What do you think?

AGAMEMNON POULOS

Tampa Bay, Florida

[A] I think you should not. I have seen too many antennas broken as a result of the loads imposed by a fluttering flag. The antenna is convenient, but not designed for that service. Lacking a sturdy upright like a light mast or tower or hardtop or outriggers, consider the purchase of a dedicated flagpole. For instance, there are those in which you permanently mount a socket into which a removable flagpole is inserted. Another type clamps to railings. Perko (perko.com) makes a complete kit that includes the mount, the pole and an American flag. Also, if your boat is fitted with rod holders, or a mount for a table or grill, perhaps you could make a DIY flagpole to fit existing hardware. Choose one of these alternatives to using your boat's VHF antenna as a flagpole.

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recessed middle section is armed with stiff bristles for

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Downington, Pennsylvania

serious scrubbing.

[A] Start working on your roller technique. While both compounds and polishes may contain abrasives, compounds are designed to remove surface flaws and imperfections, and they leave a haze or dull finish on the substrate. Polishes are designed to remove the haze left by a compound and restore gloss. You can use a polish without compounding first, but you

must polish after you use compound.

Rare Wood

Q Dear Boat Doc, what's the best way to clean the fake teak covering my swim platform?

JILL MCILVANE

Chicago, Illinois

A The maker can provide specific

WE TEST STUFF Shurhold Combo Deck Brush stubborn spots on smooth gelcoat surfaces. I have always had two boat brushes — one that's When it came to dried pieces of bait on soft for general cleaning and another with the deck, I pressed harder with the brush stiff bristles for stubborn areas of the to bring the stiffer center section to bear, nonskid sole. and the yellow bristles quickly cleaned up In a stroke of brilliance, Shurhold Industries has created one brush that does both. The 6-inch-wide brush has a wraparound The new Combo Deck Brush has an outer ring rubber bumper to keep the solid wood block containfeaturing soft fibers for gentle cleaning, while a ing the bristles from marring or scratching the boat

interior. The snap-on, quick-release brush fits any Shurhold handle, as will 40 other Shurhold attachments. Thanks to the Shurhold Combo Deck Brush, now I need only

I employed the brush to clean the boat, on the morning after a particularly messy evening of lobster fishing, and found the softer red fibers one brush to the good for sudsing the deck and upholstery. I also used it gently on a few handle); shurhol

Thanks to the Shurhold Combo Deck Brush, now I need only one brush to thoroughly wash the boat. \$33.98 (excluding handle); shurhold.com — *Jim Hendricks*



The Boat Doctor

instructions for specific kinds of stains. If you do not know which of the several faux teak suppliers made the platform covering for your boat, contact the boat's manufacturer. It should tell you who the vendor is, and you can go from there.

That said, my experience with cleaning those products has been that a solution of one cup of powdered laundry detergent per gallon of water applied with a medium-bristle, longhandle brush works great.

Roller vs. Bunk

[**Q**] Doc, do you think a roller trailer or a bunk trailer is better?

STEFAN JOSEPHSEN

Chicago, Illinois

[A] You have to consider how and where you will be launching your boat. Bunks are easier to maintain; that is, each of the numerous rollers on a trailer requires inspection, routine lubrication and regular maintenance or replacement. But for ramps at shallow-water locations, or

at tidal locations, it's hard to beat the launching convenience of rollers versus waiting on the tide to rise in order to launch or haul with a bunk trailer.

The answer to this question, like the best answer to so many boating questions, is "it depends."

The Battery

Q Can I use my voltmeter to test my battery?

DANIEL O'ROURKE

New York, New York

[A] The voltmeter installed at your helm is a good general indicator, but most of these don't read in fine enough increments to paint you a clear picture of the battery condition. Remember, the difference between a fully charged battery and one that is 50 percent discharged is just 0.8 volts.

Instead, use a hand-held digital multimeter (DMM) set to DC volts. Bring the battery to full charge and then let it "rest" for a minimum of 12 hours. The rest period ensures that any surface charge that could cause

an erroneous reading dissipates. A fully charged wet-cell lead acid battery should read 12.7 volts on the DMM during this "open voltage reading." The following shows percentages of charge versus open-circuit voltage readings for wet-cell batteries. Voltages will be slightly higher for AGM (absorbent glass mat) batteries.

Volts Percent Charge 12.7 100 percent 12.5 80 percent 12.2 60 percent 11.6 20 percent 11.4 Fully discharged

If the battery will not come up to 100 percent, it usually means that its plates have sulfated — been coated with residue — and the battery is aging. As sulfation increases, a battery will lose its ability to hold a charge as well. It may be time to replace that battery. If the battery is "dead" and the



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To see if the battery has enough power to crank the engine, you will need to perform a load test. This involves placing a large draw on the battery to replicate engine starting and watching the DMM. You can disable the start circuit of your boat in order to perform a load test, or take the battery to your mechanic or a reputable battery dealer, where they will have a special device called — you guessed it — a load tester. During the "load test" the voltage should drop to about 9.8 volts and stay there for 20 seconds. If the voltage continues to drop, the battery has lost its ability to output sufficient amperage for starting.

Always take care when working with batteries. They store a lot of energy and they contain acid.

Anchor Tie-Off

Q Dear Doc, my boat has an anchor



Boat Stand

That's an awful pretty boat. Can you tell what's wrong with this picture?

Answer: Boat stands (aka "poppets" or "jack stands") should never support the full weight of the boat. Blocking or cribbing should be placed along the keel of boats stored on the hard. This blocking or cribbing carries the weight of the boat. Boat stands are used to balance the boat. Stands should

be placed every 8 to 10 feet of the boat's length. Boat stands may be chained together under the boat, but never tie off a boat cover or tarp to the boat stand.

For more information about the proper and safe way to block up a boat, visit boatingmag.com/blockaboat. – *The* Boating *Tech Team*

locker, but there is no D-ring or cleat inside to which I can tie off the bitter end. I am afraid my crew might let the entire anchor rode out someday. Can you suggest anything?

RON CHASE

Gulfport, Mississippi

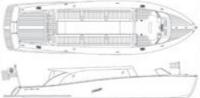
[A] If you have access to both sides of the anchor locker's aft bulkhead, you could certainly install a U-bolt and a backing plate. Alternatively, you could tie the bitter end to a scrap of wood long enough so that it won't fit through the hatch opening



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The Boat Doctor

horizontally (but you can place it through vertically). This way, there's a chance it will fetch up in the hatch opening if all the rode is streamed out by mistake.

Finally, while it's common to mark the rode at intervals, I like to tie figure-eight knots at 2-foot intervals in the last 15 feet of my rode. I do not tie off the end of my rodes, since I use several depending upon the depth I am anchoring in. In addition to simply demanding

that crew pay attention, the knots give the deck crew an indication of the end coming that they can feel, rather than just a visual check, which is helpful while anchoring and especially so at night.

ASK THE DOCTOR

Send questions with your name and address to: boatdr@boating.com or The Boat Doctor, Boating, 460 N. Orlando Ave., Suite 200, Winter Park, FL 32789.

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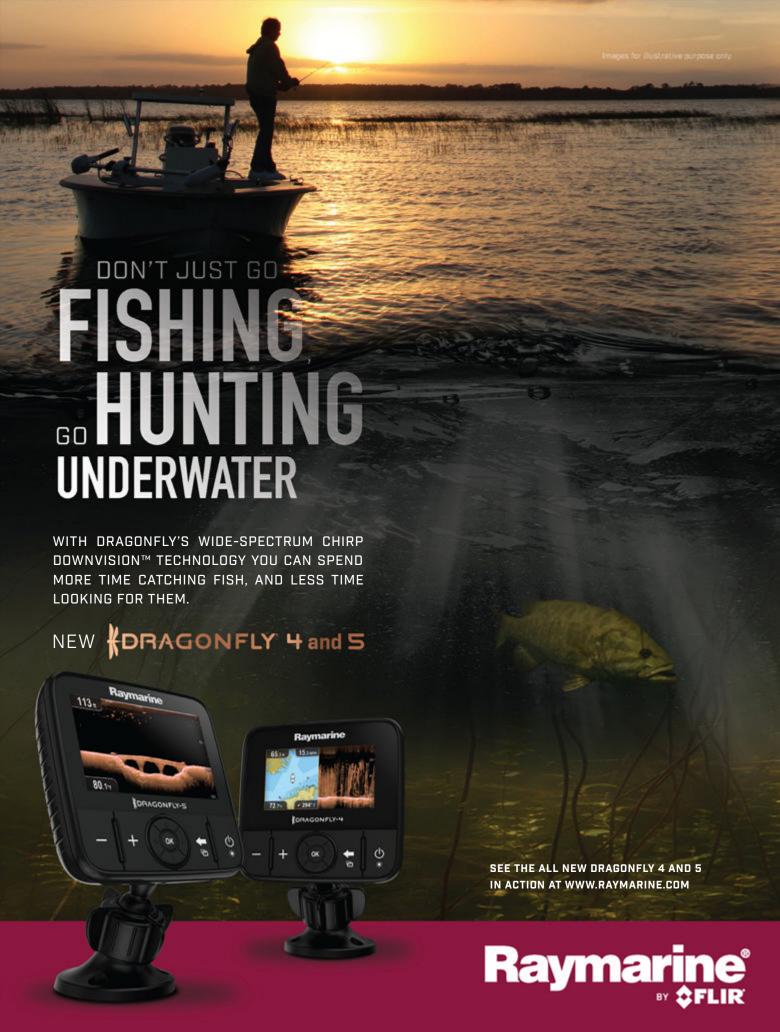
WE TEST STUFF



Outdoor Products Canyon Weather Defense Pack

As a boat tester, I have the unusual issue of bringing work gear that needs to stay dry into a wet environment. (It's why I stopped using a leather wallet.) So I'm always looking at packs I can use to stow my notes, GPS, decibel reader and other tools that don't take kindly to rain or salt spray. So when I tested the Outdoor Products Canyon Weather Defense Pack, I had a wide array of waterproof and weatherproof packs with which I could compare it.

While not waterproof (like the company's Amphibian Weather Defense Pack), the Canyon Weather Defense Pack's outer shell is weatherproof - basically the same thing as splashproof and able to keep light to moderate rain at bay. What separates it from the waterproof packs is that it's compartmentalized like a regular day pack, with a large main pouch suitable for holding a laptop and a second zippered pouch good for holding the wallet, cellphone, keys, etc. Most waterproof bags have a roll-top with a single compartment where everything settles and jumbles together in the bottom. On board a boat, especially when I can throw it in a bin under the seat or tuck it under the console. the weatherproof pack is more than fine. The padded straps and back pad keep it comfortable while donning on shore, even when I have it stuffed to the gills. \$55; outdoorproducts.com - Pete McDonald



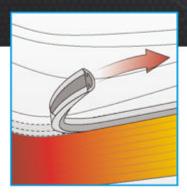
WEEKEND WORKBOOK

Retrofit Your Boat with a Seamless Rub Rail

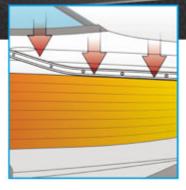
EASY-TO-INSTALL SEAMLESS RUB-RAIL SYSTEMS ELIMINATE UNSIGHTLY GAPS

If it's time for a new rub rail on your boat, your choices include semirigid or rigid vinyl models that need to be heated as you bend the material around the stern quarters and bow and require special procedures to join the sections. Over time, however, the joints can separate, creating unsightly gaps in the rub rail.

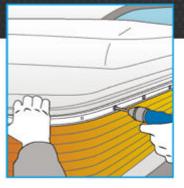
Another choice is a flexible, seamless rub-rail system from companies such as Mate USA (mate-usa.com) and Taco Marine (tacomarine.com). Such a system eliminates issues with gaps and is simple to install, as we demonstrate using the Mate USA Radial 40 kit that features a 52-foot coil of 15%-inch-wide PVC rub rail, eight 6½-foot sections of semirigid track, a pair of end caps for boats with outboard wells and a joint piece for rub rails that fully encircle the boat. — *Jim Hendricks*



REMOVE THE OLD RUB RAIL
Remove joint or end caps. Pull out
the soft vinyl insert, if applicable.
Unscrew the main rub rail and carefully
pull it off. Scrub away dirt, grime or
stains underneath and fill the old screw
holes with an epoxy filler such as Marine
Tex. Check the seal of the shoebox fitting between the hull and deck cap and,
if necessary, reseal with 3M 5200.



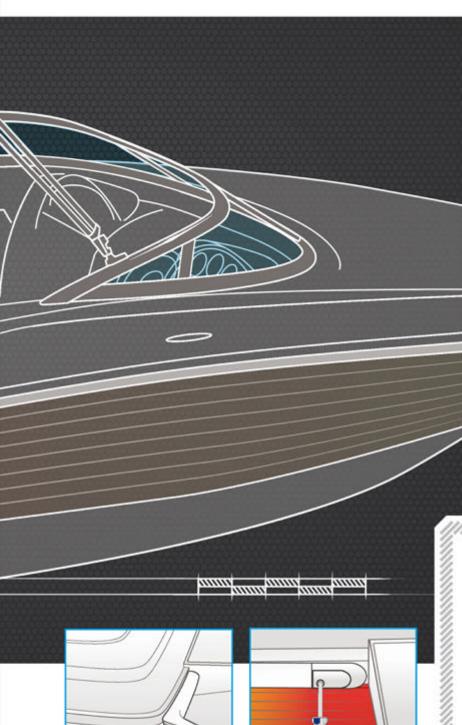
INSTALL THE TRACK Have a buddy hold the track sections while you mount them. Align the lip at the bottom of the track with the edge of the deck cap. Drill 5/32-inch-diameter holes every 6 inches through both the track and fiberglass; then drive No. 8, self-tapping stainless-steel flathead screws, applying a dab of marine sealant to each.



JOINTS AND CORNERS Butt each track section to the other as you continue around the boat, and avoid such joints at sharp bends. As you bend the track around corners, you might need to space the mounting screws more tightly — about 3 to 4 inches apart — to make sure the track closely follows the curve. Carefully trim any excess with a sharp hacksaw.

QUICK TIP

Tape out the perimeter of your boat to make sure the Mate USA 52foot rub-rail kit is of sufficient length. If it's not, you can order seamless Mate USA Radial rub-rail coils in custom lengths. Also try to match the width of your old rub rail. If the same width is not available, go up in size (not down) to hide any fade lines left from the old rail.



ATTACH THE RUB RAIL While a buddy holds the coil, bend the rub rail to expose and align the ribs with the track at the middle of the transom or edge of the splashwell. Work your way around the boat, making sure the ribs continue to lock inside the track. When the rail encircles the boat, butt the ends butt together in the middle of the transom. Attach the joint piece...



each with one or two No. 10, 1-inch,

pilot holes first).

round-head, self-tapping screws (drill

GETTING STARTED

SKILL LEVEL



TIME TO COMPLETE

4 HOURS

- Mate USA Radial 40 kit with 52 feet of track and seamless 1⁵/₈-inch-wide rub rail (\$329.99; jamestowndistributors.com)
- ► Tape measure
- ► Screwdriver set
- Drill motor and bits
- 3M marine silicone sealant (\$9.99/10.3-ounce cartridge; premiumboatcare.com)
- ➤ 3M 5200 marine adhesive (\$14.99/10-ounce cartridge; westmarine.com)
- Approximately 125 No. 8 stainless-steel, selftapping, flat-head screws (\$12.60/100 count; jamestowndistributors.com)
- Two to four No. 10, 1-inch, stainless-steel, selftapping, round-head screws (\$4.49/10 count; westmarine.com)
- ▶ Hacksaw
- Sharp knife or razor cutter
- ▶ Denatured alcohol (to clean underneath old rub rail)
- ► Shop rags (to clean and wipe away excess sealant)

FLEXIBLE VINYL RUB RAIL

Taco Marine offers its own seamless rub-rail solutions. Taco's Flexible Vinyl Rub Rail Kits come in continuous 50-

and 70-foot coils in widths ranging from 11% inches to 23% inches and attach directly to the boat with self-tapping screws without need for a heat gun. Each accepts a flexible insert after the main rail is installed. Starting at \$199.99; westmarine

.com - J.H.





2







How to Change an Inboard Prop

Pulling an inboard propeller isn't hard with the right equipment and some know-how. Here we change a prop with Jeff Fay of Fay's Boat Yard on Lake Winnipesaukee, New Hampshire, and an Algonac prop puller – a tool good for most props smaller than about 24 inches. – *Capt. Vincent Daniello*

Remove the cotter pin and loosen the nuts — a short piece of wooden 4-by-4 between a propeller blade and the boat hull keeps the prop from spinning.

Leave one nut where it isn't quite contacting the hub — about a quarter-inch gap — to stop the prop once it comes loose. We left a larger gap to illustrate.

Slip one arm of the Algonac over the hub close to the strut. The other arm fits over the tail end of the shaft. Snug the upper screw to hold the Algonac in place and then tighten the screw at the end of the Algonac farthest from the prop. This pressures the propeller by "pinching" it toward the end of the shaft.

The prop should pop off the shaft taper with a clear ring and stop at that nut you left close to the prop. The Algonac will likely fall to the ground. Remove the nut and retrieve the shaft key as the prop comes off. If the prop won't budge, "leave the Algonac tight and give the propeller hub a little heat from a torch," Fay says. "It will usually pop right off." A solid tap with a two-pound sledgehammer on the end of the Algonac closest to the rudder might also jar the prop loose.

To reinstall the prop, first make sure the key slides easily in the keyway — freshly reconditioned props nearly always require filing right at the end of the keyway. Clean and dry both the hub and shaft, and never use grease.



Slide the prop on the shaft without the key and mark the forward edge of the prop. Slide the prop on the shaft again, this time with the key. Make sure that key stays in the keyway. If not, the prop will tighten against the wedged key, not the shaft.

Tighten the larger nut until the prop reaches that mark on the shaft. "If you bind it on the key, the boat will vibrate like crazy, like the prop is way out of balance," Fay says. A key-bound prop can also crack a shaft.

Once it's tight, propeller experts suggest, swap the nuts so that the thin one (not shown) goes closest to the prop. Use a fresh cotter pin and recheck that nuts are tight after the first time the boat is used.

Dialing the Shaft

To check for a bent shaft, use a dial indicator clamped to the rudder or strut. Shafts up to a 2-inch diameter shouldn't deflect the needle more than two-thousandths of an inch at the tail of the shaft, and not more than five-thousandths halfway between the prop and the transmission. — *V.F.D.*



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→ WHAT TO LOOK FOR

Offshore Life Rafts

Life rafts are the last thing you want to think about needing on your boat. Because if you need it, your boat is either on fire or sinking and you're out of options. So we asked Jamie Reme, vice president of operations for the GPS Store in Queen Isle Beach, North Carolina (thegps store.com), about what to look for in a raft before you head offshore, based on the Viking RescYou Pro offshore raft. – *Pete McDonald*

INSULATION Look for an insulated floor to help prevent hypothermia. The RescYou Pro six-person has an insulated double floor to help stem hypothermia when floating in cold-water conditions.

UP AND IN Boarding ramps are better for entering the raft than ladders.

BETTER THAN ONE
Make sure the raft you
choose has at least two independent buoyancy chambers.

BAG IT Ballast bags, like the four 15-gallon bags on the Viking, help keep the raft stable in heavy seas.

BIG ENOUGH? How big is your crew? Look for a raft that meets the Coast Guard standard for 4 cubic feet of space for each person on board. Viking offers rafts for four, six or eight crew members.

FLASHER A strobe light on top helps rescuers find you faster.



THIS SIDE UP The RescYou Pro is self-righting to help prevent swamping in heavy seas.

KEEP IT TOGETHER
A raft can be made of
PVC, neoprene or rubber.
Viking uses vulcanized rubber
with double-taped and glued
seams to prevent it from breaking apart in rough conditions.

extras Look for a raft with prepacked safety items inside such as SOLAS (Safety of Life at Sea) aerial flares, hand-held flares, a flashlight, a whistle, drinking cups and even a fishing kit.

DRINK ME A rainwater collector on the canopy top provides extra drinking water for the crew.

BLUE, NOT GREEN A blue interior has a calming effect on those inside and helps prevent seasickness.

TWO WAYS Rafts with two entrances help multiple people board at once, which saves critical time and further limits exposure to cold water.

Hvdrostatic? Not so fast

A hydrostatic release, which automatically opens the raft's canister after it submerges, seems like a great idea. But Reme cautions recreational boaters on buying the upgrade. "Commercial vessels have them and they're designed to work at water pressures found in 4 to 6 feet of water," he says. If you're on a small boat, you don't want to wait for it to sink that far down before the raft inflates.









Tests (#2874)

Cruisers Yachts 390 Express Coupe

T WAS ABOUT HALFWAY THROUGH MY SEA trial of the Cruisers Yachts 390 Express Coupe, while motoring in a rather choppy Lower Bay south of New York City, that a memory of the mantra from an old TV beer commercial hit me like a rogue wave: Tastes great! Less filling! Like the brew in the ad, the 390 EC proved possession of two features generally thought incompatible.

Open cockpit! Climate controlled! Every boat's a compromise, right? Well, yeah. But check out the key elements Cruisers Yachts developed to ensure

For one thing, it features an accordionlike Taylor Made sunshade that is like nothing I have seen before. Closed, it thwarts rain. Open it up and the sky's the limit. The space

that the 390 EC serves both as a day boat and a cruiser.

NOTEWORTHY

While my tester's small parts — like

hatch covers were resin-infused, production boats boast hulls laminated with that weight-saving process, which should further enhance speed and economy.

vacated grants the 390 EC a 42-squarefoot skylight opening, the largest in its class, according to Cruisers Yachts. Compared with the retracting skylights aboard some boats I have tested, this one doesn't rattle or create a whistle when it's open while underway.

Compliment-inducing as that sunshade might be, I was also impressed with the windshield. This is a rope-thick piece of curved glass spanning the beam of the helm and delivering an unobstructed view. It's important to the 390 EC's mission to note that the vista is afforded

whether piloting the 390 EC or reclining on the companion lounge. Stand by.

Now, if you haven't yet noticed from gawking at the pictures, the 390 EC's side-deck access steps are forward, just abaft the helm, instead of in the typical aft location. This allows the full beam of the aft cockpit to be used for accommodation space, a fact meriting kudos all by itself. But Cruisers Yachts delivered even more boaty goodness by utilizing that extra real estate to create a seating

The Cruisers Yachts 390 EC sports a unique sunshade (top). Modular cockpit seating (center, far right) provides flexibility; the cabin is luxurious (right).













arrangement that can take on four distinct layouts.

There is no primary seating plan. It all depends upon what the day holds in store. I came into the 390 EC over the swim platform and through a centerline walkway between two L-shaped lounges. But during the course of our photo shoot, I changed the layout by sliding the portside L-lounge to starboard and creating a U-shaped seating area, served by a table at which six could sit. Then I dropped the folding wenge cockpit table (\$2,405 with fillers) and lay down the aft backrests, turning the seating into a sun lounge. The fourth iteration manifests itself by leaving the aft backrests erect and deploying the kickstands that prop the forward seat bottoms at an angle so as to create chaiselike backrests, thus creating an encircled "playpen" lounge.

I should mention that the cockpit sole is all one level for ease of access from transom to companionway. Also, there is a bow chaise lounge optionally available (\$5,020) and our tester sported the complete wet bar with the grill (\$1,890) and the refrigerator (\$2,920).

Putting it all together, you open the sunshade and create a breeze-filled cockpit with seating for about a dozen, or lounging for six, or quiet reading at anchor for two, or ... You can entertain to suit the crowd du jour.

Now close the sunshade. In fact, put up the weather curtains. These enclose the helm and companion lounge so you can enjoy protection from the weather en route to a weekend getaway. Because the hardtop extends aft of the drop curtain, if you leave one zipper unzipped, you can dash out to the transom platform, or up and around the side decks to the bow, without any canvas in your way. It's very seamanlike, and the boat that was yesterday's darling at the dock is today appreciated for the comfort provided in making a big water crossing.

Comfort is delivered via ride quality too. Test day's blustery weather kept our helicopter grounded "on call" and us on station in a steadily building chop. In those gray whitecaps, the Cruisers Yachts 390 EC fared well. Landings were soft — pounding more an expectation than an occurrence. The 390 EC felt buoyant. Running down-sea, it tracked admirably straight. Weight savings in the form of balsacore construction, resin infusion, and careful materials and accessories selection help it to achieve excellent speed and

performance. For example, we hit 40.3 mph powered by twin 430 hp MerCruiser 8.1 HO Bravo Three X Axius Premier sterndrives. But as the seas built to those described, we were most comfortable at about 22 mph.

Belowdecks, the 390 EC offers a full-beam aft master stateroom — the only boat so arranged in this size class. Eight hull-side windows (they're actually one long window per side with masks: cool, huh?) and a skylight under the windshield work together to ensure this designer cabin's lightness and airiness.

You might compare the 390 EC to Beneteau's GT 38 (\$358,900 with twin 300 hp Volvo Penta D4 diesel sterndrives) or the Sea Ray 370 Sundancer (\$468,712 with twin 380 hp MerCruiser gasoline sterndrives). You might. But the Cruisers Yachts 390 EC combines a unique set of features that we've yet to see another builder replicate. - Kevin Falvey







High Points

- "Helm forward" layout allows for an amazing, single-level cockpit that transforms into four distinct seating arrangements.
- ► Windshield is one honking-big piece of curved glass that provides unobstructed sight lines cruising and enhanced views relaxing.
- A full-beam master stateroom aboard a 39-foot boat: All I can say is "wow!"

Low Points

- Hull No. 1 could have used grab rails along the cabin side to enhance safety going to the bow. Cruisers Yachts said such rails will be added.
- ► There's no standard privacy curtain for the convertible dinette berth?
- Forward-positioned side-deck access steps increase cockpit width but impede side-to boarding ease.

►LOA: 39'0" ▶Beam: 12'8" ▶Draft (max, w/ IPS): 3'9" ▶Displacement (approx.): 20,000 lb. ►Transom Deadrise: 16 degrees ► Bridge Clearance: 11'0" ► Max Cabin Headroom: 6'6" ► Fuel Capacity: 230 gal. ► Max Horsepower: 860 ► Available Power: Twin MerCruiser or Volvo Penta sterndrives to 860 hp total; twin Volvo Penta IPS to 740 hp

Price: \$535,630 (with test power)

BOATING Certified Test Results SPEED **EFFICIENCY OPERATION** naut. mpg stat. mpg n. mi. range s. mi. knots gph angle 1000 6.52 7.50 4.40 1.48 1.70 307 353 0 81 1500 8.55 7.60 1.13 202 2000 8.78 10.10 12.40 0.71 84 2500 10.17 11.70 19.10 0.53 0.61 127 14.03 16.15 84 3000 27.00 0.52 0.60 108 124 3500 21.42 24.65 36.90 0.58 0.67 120 138 86 4000 27.46 31.60 49.90 0.55 0.63 114 131 88 90 4500 30.85 35.50 64.80 0.48 0.55 99 113 2 4850 35.32 40.65 73.00 0.48 0.56 100 115

HOW WE TESTED

MOST ECONOMICAL CRUISING SPEED

ENGINE: Twin 430 hp MerCruiser 8.2 HO CAT Axius Premier gasoline sterndrives DRIVE/ PROP: Bravo Three X/24"-pitch stainless-steel propset GEAR RATIO: 2.2:1 FUEL LOAD: 115 gal, CREW WEIGHT: 625 lb.

Cruisers Yachts Oconto, Wisconsin; 920-834-2211; cruisersyachts.com



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ELECTRONIC VESSEL CONTROL



Tests (#2875)

Bayliner Element XR7

NYONE WHO FOLLOWS THE LATEST TRENDS in boats — especially those of us who do it for a living — has taken note of the rapid rise in popularity of pontoon boats over the last few years. So it's no surprise that Bayliner — a company with an ear well tuned to its customers' feedback — decided to build a boat that appeals to pontoon lovers. Bayliner's new Element XR7 is a pontoonish boat without the actual aluminum pontoons. Instead, the deck is mated to an honest-to-goodness fiberglass hull, providing an alternative to boaters who love the spaciousness of a pontoon layout but aren't so enamored with aluminum.

NOTEWORTHY

In a nod to its pontoon competition,

Bayliner protects the XR7's rearfacing loungers with stainlesssteel rails that match the boat's freeboard.

Fortunately for Bayliner, it didn't have to go too far afield to find the right hull form. In 2013, Bayliner struck gold with its launch of the Element, an economical, spacious and practical runabout that appeals to firsttime boaters. Last year, Bayliner came out with the XL version, which upped the standard horsepower from 60 to 90 and the length overall (LOA) from 16 feet to 18 feet. Bayliner built the Element on a hull form it calls the M-hull.

The M-hull is ideal for a 'toon style because it has a few of the same attributes — predictability, ease of planing and stability at rest. The M-hull works like a trimaran, with the V running down the centerline and two V-shaped sponsons outboard with hard chines. Instead of tapering flat aft, the sponsons maintain their V all the way to the stern. Since it seems so adaptable for a pontoon-style layout, Bayliner integrated that, extending the centerline to 22 feet and widening the beam to 8 feet 6 inches. The bow and stern platforms extend the length overall to 25 feet 6 inches and provide fore and aft water access that's hard to beat.

The fiberglass components allow Bayliner some advantages over traditional pontoons, including two gigantic ski lockers set into the fiberglass sole. Also, whereas most pontoons employ a fold-out canvas "privacy" curtain for changing and

The XR7 has great in-sole storage, an elevated helm, a fully lined head in the starboard console and a layout that rivals a pontoon boat's.













using the loo, the XR7 has an enclosed head in the starboard console. Space in the console extends forward to provide additional storage. The helm itself is raised 5 inches off the deck to give the skipper a better view of the water from the high-back captain's chair. We find these raised helms a necessity aboard boats with pontoon-style deck layouts, because crowds tend to sit together in front of the helm.

To prove its pontoonlike capabilities, we tested the XR7 with a crew of six and the Bimini top deployed and still approached 40 mph. We climbed onto plane in about four seconds and felt safe and secure at the helm and from every seat. It did porpoise a bit at wide-open throttle, but Bayliner said that after further testing it would adjust the engine mount in production to negate that.

There are now several 'toons out there with performance packages that incorporate a third centerline tube that helps them approach fiberglass V-hulls in speed and handling. Pontoons with triple tubes also can offer at least one deep insole ski locker in the center tube. Since the XR7's centerline length is 22 feet, it compares most directly with pontoons like the SunChaser 8522 LR (\$31,730 with an Evinrude 150 E-TEC). The SunChaser posted slightly slower numbers with a 150 hp outboard and displayed agile handling thanks to its RPT technology, which includes shaping the tubes to include keels and chines. Another triple-tube pontoon we tested, the Lowe Xtreme 230 (price is not available) broke 45 mph with a Mercury 250 Verado and also displayed agile handling. That said, the Element XR7's fiberglass hull curves upward in the bow to deflect spray and provides passengers with more rough-water protection than an aluminum pontoon can.

The XR7's deck plan is all pontoon. The forward seating includes opposing couches (a 'toon term) with forward-facing backrests, flip-up armrests and storage underneath. There's an actual anchor locker in the bow, a rare commodity on an aluminum pontoon. The side-boarding gate to port helps at the dock — though our tester lacked a strap or chock to hold it open — and more seating can be found in the main cockpit. The entertainment center has the option for a fridge, and the aft rear-facing lounges are protected by stainless-steel rails. Instead of an extended swim platform,

Bayliner employs extended swim steps around the outboard that provide ample space for water access. Note too how the boarding ladder angles away from the outboard's propeller. The XR7 offers the one layout; most pontoons have choices.

Bayliner is not the first fiberglass builder to incorporate a pontoon-style deck. Hurricane has been building FunDecks for years, and the 226 FunDeck (\$42,075 with a 150 hp Yamaha) boasts similar dimensions to the XR7's, though with a boxier profile and without the built-in fiberglass head. While both hold an advantage over aluminum in salt water, of the two the Element XR7 has the sleekest lines and looks to have the better rough-water capability, thanks to the M-hull. We found that the XR7 could handle small-boat wakes and manufactured chop without taking any spray into the cockpit, and (more importantly) without jarring any of the passengers around.

Overall, with the new Element XR7, Bayliner looks like it's onto something. If it can merge the original mission of the Element — to bring affordability and simplicity to the entrylevel boater — with a pontoon boat's stability and sociability, then it's win-win. — *Pete McDonald*

SCAN ME!

To view more photos and additional information for the Bayliner Element XR7, go to boatingmag.com/2875. To view an accommodation plan for this boat, scan this tag!





High Points

- ► Fully enclosed head is a major step up compared with the privacy curtains found aboard most pontoon boats.
- ▶ High, upturned bow provides more rough-water protection than pontoons.
- ► Hey, there's an actual anchor locker.

Low Points

- ► Enclosed head needs some sort of ventilation.
- ➤ Side boarding gate on our test boat lacked a means to hold it open, which Bayliner will address during production, we were told. Double-check.

LOA: 25'6" ▶ Beam: 8'6" ▶ Draft: 2'3" ▶ Displacement (approx.): 4,464 lb. ▶ Transom Deadrise: NA ▶ Bridge Clearance: 8'6" ▶ Fuel Capacity: 40 gal. ▶ Max Horsepower: 200 ▶ Available Power: Mercury outboards to 200 hp

Price: \$47,513 (as tested)

▼ BOATING Certified Test Results

| SPEED | | | | El | OPERATION | | | | |
|---------|-----------|-------------|-------|--------------|--------------|-----------------|-----------------|-------|----------------|
| rpm | knots | mph | gph | naut. mpg | stat. mpg | n. mi. range | s. mi. range | angle | sound level |
| 1000 | 3.82 | 4.40 | 0.70 | 5.46 | 6.29 | 197 | 226 | 1 | 64 |
| 1500 | 7.30 | 8.40 | 1.20 | 6.08 | 7.00 | 219 | 252 | 1 | 66 |
| 2000 | 8.08 | 9.30 | 2.20 | 3.67 | 4.23 | 132 | 152 | 2 | 70 |
| 2500 | 8.52 | 9.80 | 2.90 | 2.94 | 3.38 | 106 | 122 | 4 | 72 |
| 3000 | 11.82 | 13.60 | 3.50 | 3.38 | 3.89 | 122 | 140 | 5 | 75 |
| 3500 | 14.16 | 16.30 | 4.70 | 3.01 | 3.47 | 108 | 125 | 5 | 78 |
| 4000 | 22.77 | 26.20 | 6.40 | 3.56 | 4.09 | 128 | 147 | 3 | 81 |
| 4500 | 29.37 | 33.80 | 8.50 | 3.46 | 3.98 | 124 | 143 | 2 | 84 |
| 5000 | 33.63 | 38.70 | 12.00 | 2.80 | 3.23 | 101 | 116 | 2 | 87 |
| MOST EC | CONOMICAL | CRUISING SE | PEED | | | | | | |

HOW WE TESTED

ENGINE: 200 hp Mercury Verado DRIVE/PROP: Outboard/Enertia 15¼" x 19" 3-blade stainless steel GEAR RATIO: 2.08:1 FUEL LOAD: 20 gal. CREW WEIGHT: 1,200 lb.

Bayliner Boats Knoxville, Tennessee; 360-435-8957; bayliner.com



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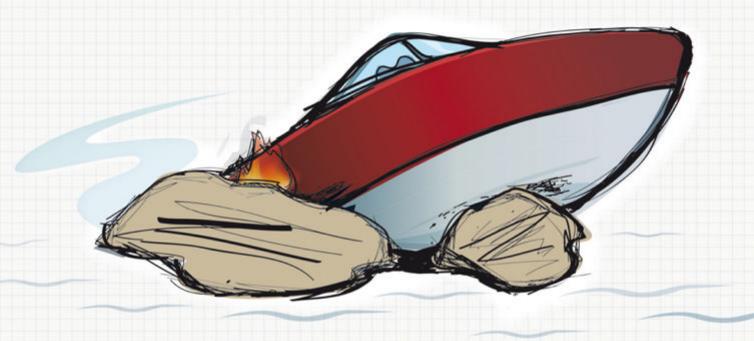
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towing service: \$500

gearcase replacement: \$5,000

hull repair: \$12,000







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Formula 330 CBR

HEN YOU BOARD A FORMULA THERE'S an expectation of crisp, sporty lines, above average attention to luxury and comfort, and performance that comes from a company steeped in hotboat heritage. Formula's 330 CBR boasts all that and helps define the category of luxury day boat.

The twin 430 hp MerCruiser sterndrives proved as responsive to the smooth, short stroke of the throttles as a light switch. When they're on, they're on. At high speed, the 330 CBR rides smooth, as would be expected for a boat of its length and weight, but what is not expected is its nimble grace in hard-over turns and its

EXTRA POINT

Formula paints on the hull graphics with

Imron. These are more durable than taped-on ones, and they won't chalk or fade like gelcoat hull graphics. ability to hold speed in them when many boats its size would slow. Joystick controls made the 330 CBR easy to dock in tight spaces, but for the seasoned boater, it was equally responsive to a light hand on the dual digital shifters and separate dual throttles. On the left throttle, under the thumb, is a dual-drive trim switch. Individual trim switches and trim tab controls are

within fingertip reach of the throttles at speed. Joystick operation, available with either MerCruiser or Volvo Penta drives, also gives the station-keeping benefit, an ability to hold position even in current and wind while you wait for a lock or bridge or take a phone call. MerCruiser calls it Skyhook.

This 330 CBR is also about relaxing, reclining and maybe even snoozing in the cabin below.

Formula's dual helm has flip-up bolsters that snap in place for stand-up driving. The dual helm seat backs rock toward the helm, creating an aft-facing seat. Formula's convertible aft lounge completes the cozy, though roomy, circular cockpit seating or folds into an aft-facing sun lounge for hanging out on the hook, sunbathing or watching the kids swim off the platform.

Forward seating at the bow offers yet another spacious zone for sunning, relaxing or taking the breeze over the bow. Ample grab rails and optimum seating depth mean the ride is comfortable and secure at speed.

The cabin below the bow seating is surprisingly spacious. There's a full head. To port, the fully functional galley enables easy meals, cold drinks or hot morning coffee. The latter would be most appreciated after being rocked to sleep in the large berth. $-Randy\ Vance$

MORE ONLINE

To see our full video review of the Formula 330 CBR, visit boatingmag.com/2876.

AVAILABLE PO



High Points

- Optional 6,000 Btu reverse cycle air-conditioner with digital climate control keeps the berth cool.
- An entertainment galley with fresh water and stainless-steel refrigerator makes parties complete.
- ▶ Service access to the engines and genset was ample when activating the electric hatch.
- ► Wiring was all securely loomed and chafe-protected.

Low Points

- A faux-teak sole on the swim platform would be more apropos on a boat in this price range.
- Coaming bolsters in the cockpit would be more comfortable with a bit more slope angle to their shape.
- Optimum fuel economy is low for frequent day cruising.

Toughest Competitor

- You'd have to look to Cobalt's new 336 (\$287,948) to find comparable performance, equipment and luxury. Its impossibly fastidious molding process ensures absolutely glossy gelcoats, snugly upholstered dashboard and coamings, and superbly comfortable seating as well.
- ► LOA: 33'0" ► Beam: 10'3" ► Draft: 2'11" ► Displacement (approx.): 12,250 lb. (dry, without power) ► Transom Deadrise: 21 degrees ► Bridge Clearance: 8'10" (with arch), 6'6" (without arch) ► Max Cabin Headroom: 6'0" ► Fuel Capacity: 151 gal. ► Max Horsepower: 860 ► Available Power: Mercury or Volvo Penta sterndrives to 860 hp
- Price: \$424,160 (as tested)

▼ BOATING Certified Test Results

| SPEED | | | 2.5 | EI | OPERATION | | | | |
|---------|------------|-------------|-------|--------------|--------------|-----------------|-----------------|-------|----------------|
| rpm | knots | mph | gph | naut. mpg | stat. mpg | n. mi. range | s. mi. range | angle | sound level |
| 1000 | 4.95 | 5.70 | 4.90 | 1.01 | 1.16 | 137 | 158 | 0.0 | 68.0 |
| 1500 | 7.39 | 8.50 | 8.30 | 0.89 | 1.02 | 121 | 139 | 1.0 | 71.0 |
| 2000 | 9.30 | 10.70 | 14.10 | 0.66 | 0.76 | 90 | 103 | 2.0 | 75.0 |
| 2500 | 13.30 | 15.30 | 21.50 | 0.62 | 0.71 | 84 | 97 | 4.0 | 78.0 |
| 3000 | 24.16 | 27.80 | 25.20 | 0.96 | 1.10 | 130 | 150 | 2.0 | 81.0 |
| 3500 | 30.15 | 34.70 | 31.40 | 0.96 | 1.11 | 131 | 150 | 1.0 | 83.0 |
| 4000 | 36.58 | 42.10 | 41.70 | 0.88 | 1.01 | 119 | 137 | 0.0 | 86.0 |
| 4500 | 42.23 | 48.60 | 56.30 | 0.75 | 0.86 | 102 | 117 | 0.0 | 90.0 |
| 4800 | 44.14 | 51.60 | 63.00 | 0.70 | 0.81 | 95 | 110 | 0.0 | 91.0 |
| MOST EC | ONOMICAL (| CRUISING SE | PEED | | | | | | |

HOW WE TESTED

ENGINE: Twin 430 hp MerCruiser 8.2 MAG DRIVE/PROP: Bravo Three/26" (15%" front, 14%" rear) stainless steel GEAR RATIO: 2.0:1 FUEL LOAD: 125 gal. CREW WEIGHT: 240 lb.

Formula Boats Decatur, Indiana; 800-736-7685; formulaboats.com

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load off. We used the five rod holders on each side of the console, though interference from the T-top prevented us from using the aftmost holders.

Coaming bolsters pad the gunwales, which measure 24 inches high in the bow and 21 inches in the stern. Beefy, 8-inch pull-up cleats (two in the bow, two amidships and two aft) keep the covering boards clear of snags.

This boat draws 18 inches with the outboards up, and we were able to put the 26 in surprisingly shallow water, even with the engines down.

The twin counter-rotating Yamaha F200 outboards vaulted the 26 to plane in just 3.1 seconds, and we reached 30 mph in 5.8 seconds en route to a top speed of 59.4 mph at 6,100 rpm. The Yellowfin 26 combines performance and quality in a boat that's versatile enough to fish just about anywhere. — *Jim Hendricks*

Yellowfin Yachts

26

ILLING A SLOT IN THE YELLOWFIN YACHTS stable between the 24 Bay and the 29 center-console, the new 26 boasts a step amidships and reflects a blend of offshore- and bay-boat features.

An upright 50-gallon livewell behind the helm seating and available twin outboards appeal to offshore anglers, while the elevated aft casting deck caters to inshore fishing enthusiasts.

The Yellowfin 26 handled predictably whenever we brought it about at high speed with the U-Flex powerassist steering. With 20 degrees of deadrise at the

EXTRA POINT

Seat backs in the aft platform lift

up in each corner so crew members can take a load off while cruising to a new fishing spot. transom, the 26 sliced smoothly through the 2- to 3-foot seas outside the inlet.

The splatter-style nonskid sole provides secure footing. Deep gutters channel water aft to healthy-size scuppers in the stern quarters to help keep the deck dry.

An optional T-top with an overhead electronics box features a fabric

covering and a rack of five angled rod holders across the back. A powder-coated aluminum frame deters corrosion. A flush-mounted Garmin GPSMAP 8215 (15inch) multifunction display fits nicely on the helm panel.

The anchor locker in the bow easily holds 300 feet of anchor line. Molded-in recesses allow you to secure a Danforth-style anchor in the lip around the anchor locker opening.

The console of the 26 opens upward from the front, and while there is no room for a marine toilet, this compartment offers easy access to the tidy helm rigging.

A thickly upholstered seat on the outside of the console hatch becomes a comfortable place to take a

MORE ONLINE

For a photo gallery of the Yellowfin 26, visit boatingmag.com/2877.

AVAILABLE POWER



High Points

- ▶ Dual-purpose design lets you fish inshore or offshore.
- ▶ Twin 200 hp outboards offer exhilarating speed and remarkable efficiency.
- Fifty-gallon livewell delivers ample bait capacity.

Low Points

- ▶ No room for a toilet in the console means you sacrifice privacy.
- ► T-top frame interferes with vertical rod stowage around the console.
- A taller windshield would help protect captain and co-pilot from wind blast.

Toughest Competitor

▶ The Contender 24 Sport (\$110,313 with single Yamaha F300 and trailer) also combines inshore and offshore capabilities but is 18 inches shorter and offers 24 gallons less livewell capacity.

▶ LOA: 26'0" ▶ Beam: 8'8" ▶ Draft: 1'6" (motors up) ▶ Displacement (approx.): 5,200 lb. (with power) ▶ Transom Deadrise: 20 degrees ▶ Bridge Clearance: 9'0" (with T-top) ▶ Fuel Capacity: 118 gal. ▶ Max Horsepower: 400 ▶ Available Power: Single or twin Mercury or Yamaha outboards to 400 hp

Price: \$145,000 (as tested)

▼ BOATING Certified Test Results

| SPEED | | | | E | OPERATION | | | | |
|---------|------------|-------------|-------|--------------|--------------|-----------------|-----------------|-------|----------------|
| rpm | knots | mph | gph | naut. mpg | stat. mpg | n. mi. range | s. mi. range | angle | sound level |
| 1000 | 4.69 | 5.40 | 1.80 | 2.61 | 3.00 | 277 | 319 | 0 | 68 |
| 1500 | 6.08 | 7.00 | 2.90 | 2.10 | 2.41 | 223 | 256 | 0 | 72 |
| 2000 | 6.95 | 8.00 | 5.30 | 1.31 | 1.51 | 139 | 160 | 3 | 75 |
| 2500 | 14.16 | 16.30 | 6.80 | 2.08 | 2.40 | 221 | 255 | 5 | 84 |
| 3000 | 17.64 | 20.30 | 7.90 | 2.23 | 2.57 | 237 | 273 | 1 | 85 |
| 3500 | 30.24 | 34.80 | 10.20 | 2.96 | 3.41 | 315 | 362 | 1 | 87 |
| 4000 | 33.89 | 39.00 | 13.70 | 2.47 | 2.85 | 263 | 302 | 1 | 89 |
| 4500 | 36.32 | 41.80 | 16.10 | 2.26 | 2.60 | 240 | 276 | 1 | 94 |
| 5000 | 40.32 | 46.40 | 19.40 | 2.08 | 2.39 | 221 | 254 | 1 | 96 |
| 5500 | 45.80 | 52.70 | 30.40 | 1.51 | 1.73 | 160 | 184 | 1 | 98 |
| 6000 | 51.01 | 58.70 | 39.30 | 1.30 | 1.49 | 138 | 159 | 1 | 100 |
| 6100 | 51.62 | 59.40 | 40.20 | 1.28 | 1.48 | 136 | 157 | 1 | 101 |
| MOST EC | ONOMICAL (| CRUISING SE | PEED | | | | | | |

HOW WE TESTED

ENGINE: Twin 200 hp Yamaha F200 I-4s PROP: 13½" x 21" Yamaha Reliance 3-blade stainless steel GEAR RATIO: 1.86:1 FUEL LOAD: 110 gal. CREW WEIGHT: 370 lb.

Yellowfin Yachts Bradenton, Florida; 941-753-7828; yellowfin.com



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World Cat 295DC

WE SAY Testing World Cat's 295DC (Dual Console) gave us a chance to compare this hull with its predecessor, the 290DC, which we ran a year prior. World Cat elevated the space between the two sponsons by deepening the hull. The new model reached 30 mph in 6.4 seconds — one second quicker than the 290DC. The updated hull achieved a higher top speed — 47.7 mph

versus 46.5 mph for its predecessor. The 295DC remained fairly flat while cornering with the SeaStar Solutions power-assist steering. The port console houses a head compartment with a VacuFlush toilet and vanity with a sink and freshwater faucet, as well as storage for four fishing rods (up to 7 feet). You'll find a 30-gallon livewell abaft the port bench seat and a 185-quart insulated cooler/fish box abaft the helm seat.

A transom bench seat folds away. The aft swim platform allows you to fight a fish around the stern. There's space to mount a single electronics display as large as 12 inches at the helm.

The biggest downside of a dual console is the inability to move along the rail while fishing. Yet, the 295DC compensates with wide-open fishing spaces and a hull that offers one of the smoothest rides you'll find in any 29-footer. — *Jim Hendricks*

WHO'D WANT ONE Offhsore anglers who also enjoy cruising with family.

ANOTHER CHOICE Grady-White's Freedom 285 (\$219,745 with twin Yamaha F250s and Helm Master) is another dual console, but with a deep-V hull versus a catamaran hull.

BOTTOM LINE \$207,955 (with twin Yamaha F300s); worldcat.com

BOATING Certified Test Results

| SPEED | | | | EF | OPERATION | | | | |
|---------|---------|-----------|---------|--------------|-----------|-----------------|-----------------|-------|----------------|
| rpm | knots | mph | gph | naut. mpg | | n. mi. range | s. mi. range | angle | sound level |
| 1000 | 4.34 | 5.00 | 2.60 | 1.67 | 1.92 | 376 | 433 | 0 | 69 |
| 1500 | 6.34 | 7.30 | 4.30 | 1.48 | 1.70 | 332 | 382 | 1 | 70 |
| 2000 | 7.30 | 8.40 | 7.00 | 1.04 | 1.20 | 235 | 270 | 5 | 75 |
| 2500 | 17.64 | 20.30 | 10.20 | 1.73 | 1.99 | 389 | 448 | 3 | 84 |
| 3000 | 21.03 | 24.20 | 12.80 | 1.64 | 1.89 | 370 | 425 | 3 | 84 |
| 3500 | 25.81 | 29.70 | 15.70 | 1.64 | 1.89 | 370 | 426 | 3 | 85 |
| 4000 | 28.33 | 32.60 | 22.30 | 1.27 | 1.46 | 286 | 329 | 3 | 88 |
| 4500 | 33.80 | 38.90 | 29.70 | 1.14 | 1.31 | 256 | 295 | 4 | 88 |
| 5000 | 35.89 | 41.30 | 36.10 | 0.99 | 1.14 | 224 | 257 | 4 | 99 |
| 5500 | 40.32 | 46.40 | 47.30 | 0.85 | 0.98 | 192 | 221 | 4 | 100 |
| 5800 | 41.45 | 47.70 | 48.80 | 0.85 | 0.98 | 191 | 220 | 4 | 102 |
| MOST EC | ONOMICA | L CRUISIN | G SPEED | | | | | | |

LOA: 29'1" ▶ Beam: 9'6" ▶ Draft: 1'3" (motors up) ▶ Displacement (approx.): 8,300 lb. (without power)

HOW WE TESTED

ENGINE: Twin 250 hp Yamaha F250s PROP: 15½" x 17" Yamaha Saltwater Series II 3-blade stainless steel GEAR RATIO: 2.0:1 FUEL LOAD: 200 gal. CREW WEIGHT: 410 lb.

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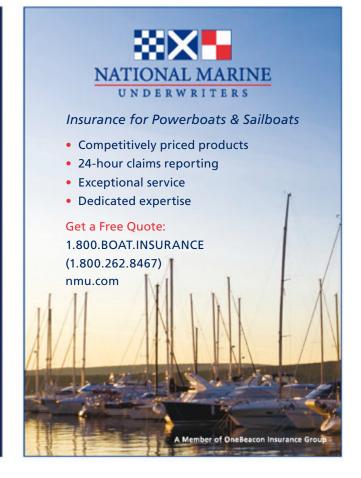
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Cobalt 200S

WE SAY When does size not matter? When a boatbuilder uses many of the same amenities found on its bigger vessels on the smallest craft in its lineup. Take the Cobalt 200 — and in particular the 200S version we tested — which possesses fit and finish comparable to all of Cobalt's runabouts.

The "S" in the name stands for Cobalt's sport cockpit layout option.

The standard 200 has a rear-facing chaise lounge configuration with a rear-facing backrest on the port console. The S-package consists of forward-facing seating in front of the port console. But the backrest is adjustable so that it can be converted to a rear-facing lounge or fully reclined for a sun pad.

One of my favorite features is the signature flip-down swim step on the extended swim platform. It makes reboarding from the water a nonissue.

The construction has notable attributes like a Kevlar-reinforced hull and graphics molded into the gelcoat. The most impressive thing is Cobalt's Free Space Reclamation (FSR) process, which engineers the hull and deck in the mold to create an extra foot of interior width in the cockpit.

The deep-V hull with 20-degree transom deadrise and an extended running surface help the boat handle seas and achieve a near-44 mph top end, plane in 4.6 seconds and hit 30 mph in 9.8 seconds. — *Pete McDonald*

WHO'D WANT ONE Family boaters looking for a high-quality bowrider.

ANOTHER CHOICE Check out the Regal 2100 (\$52,615 with a 225 hp Volvo Penta V-8 SX sterndrive), which features Regal's FasTrac stepped hull.

BOTTOM LINE \$55,643; cobaltboats.com

▼ BOATING Certified Test Results

| SPEED | | | | EF | OPERATION | | | | |
|---------|---------|-----------|----------|--------------|--------------|-----------------|-----------------|-------|----------------|
| rpm | knots | mph | gph | naut. mpg | stat. mpg | n. mi. range | s. mi. range | angle | sound level |
| 1000 | 3.65 | 4.20 | 1.20 | 3.04 | 3.50 | 109 | 126 | 2 | 70 |
| 1500 | 5.65 | 6.50 | 1.80 | 3.14 | 3.61 | 113 | 130 | 2 | 71 |
| 2000 | 7.13 | 8.20 | 3.30 | 2.16 | 2.48 | 78 | 89 | 4 | 72 |
| 2500 | 9.47 | 10.90 | 6.30 | 1.50 | 1.73 | 54 | 62 | 7 | 73 |
| 3000 | 20.77 | 23.90 | 7.30 | 2.85 | 3.27 | 102 | 118 | 2 | 77 |
| 3500 | 26.07 | 30.00 | 7.90 | 3.30 | 3.80 | 119 | 137 | 2 | 80 |
| 4000 | 29.63 | 34.10 | 10.10 | 2.93 | 3.38 | 106 | 122 | 2 | 81 |
| 4500 | 34.50 | 39.70 | 14.40 | 2.40 | 2.76 | 86 | 99 | 2 | 82 |
| 4900 | 38.15 | 43.90 | 16.00 | 2.38 | 2.74 | 86 | 99 | 2 | 85 |
| MOST EC | ONOMICA | L CRUISIN | IG SPEED | | | | | | |

► LOA: 20'10" ► Beam: 8'4" ► Draft: 3'1" ► Displacement (approx.): 3.500 lb.

HOW WE TESTED

ENGINE: 225 hp Volvo Penta V-8 DRIVE/PROP: SX/141/4" x 19" 3-blade stainless steel GEAR RATIO: 1.79:1 FUEL LOAD: 10 gal. CREW WEIGHT: 340 lb.

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THREE TIPS FOR PROTECTING YOUR BOAT FROM E10 GASOLINE

et's assume the adventure you have been planning does not include the episode where your boat is bobbing dead in the water while you troubleshoot a tank full of crappy gas. Here's how to avoid that scenario. Ethanol remains the leading culprit of fuel issues in gasoline-powered marine engines — ethanol is corrosive, it's a solvent, and it absorbs moisture. In a boat it's nothing but trouble. The obvious action is to not fuel your boat with an ethanol-blend gas. When that's not an option, you need an ethanol defense strategy, like these tips we've gleaned from Yamaha Marine.

Install a 10-micron water-separating fuel filter for each engine. Then carry at least one spare element for each filter on your boat. Make sure the filter has an adequate flow rating. Yamaha's big filter flows 90 gph; its smaller filter flows 60 gph and is for outboards less than 115 hp. Yamaha says its filters

achieve 95 percent filtration, almost double the 51 percent filtration rate required for the 10-micron rating. That's right — a filter can carry a 10-micron rating and still allow 49 percent of debris larger than 10 microns to pass right on by. Here's where I become an advocate for using products branded by original equipment manufacturers. When a motor builder puts its brand on the label of a filter or an additive or oil, it puts its warranty on the line. OEM products invariably exceed minimum standards. Why settle for any but the best products for your very expensive marine engine - to save a few bucks? Be smart and buy cheap beer instead.

Use a marine-specific fuel stabilizer at the correct ratio in every tank of fuel to prevent oxidation and phase separation. Yamaha says its proprietary stabilizer formula features anticorrosive components that protect exposed copper, solder and other metals from the nasty sodium sulfate present in ethanol. Yamaha stabilizer is petroleum-based, rather than alcohol-based. because why would you put an alcohol-based fuel additive in a boat tank? Sniff that stabilizer you've been using. If it smells like rubbing alcohol, don't use it in the boat.

- Charles Plueddeman

Finally, Yamaha recommends use of its Ring Free Plus additive. As its name implies, Ring Free was originally developed to prevent carbon buildup in the ring lands of twostroke outboards, but this latest formula is a great dispersant with a dose of corrosion inhibitors. Ring Free will be especially helpful if you are running an older motor with carburetors that are prone to gunking up.

OUICK TIP Use a wrench to remove filters, using a scrap of sandpaper for grip, if required. Install replacements "hand tight," and always check for leaks.

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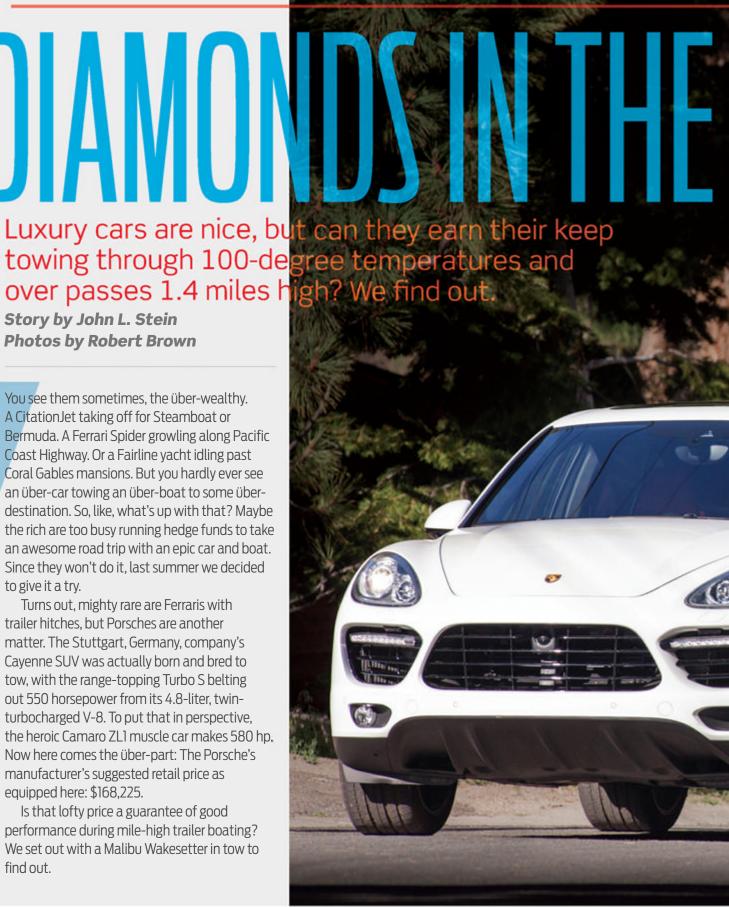
UIAMUI

Story by John L. Stein **Photos by Robert Brown**

You see them sometimes, the über-wealthy. A CitationJet taking off for Steamboat or Bermuda. A Ferrari Spider growling along Pacific Coast Highway. Or a Fairline yacht idling past Coral Gables mansions. But you hardly ever see an über-car towing an über-boat to some überdestination. So, like, what's up with that? Maybe the rich are too busy running hedge funds to take an awesome road trip with an epic car and boat. Since they won't do it, last summer we decided to give it a try.

Turns out, mighty rare are Ferraris with trailer hitches, but Porsches are another matter. The Stuttgart, Germany, company's Cayenne SUV was actually born and bred to tow, with the range-topping Turbo S belting out 550 horsepower from its 4.8-liter, twinturbocharged V-8. To put that in perspective, the heroic Camaro ZL1 muscle car makes 580 hp. Now here comes the über-part: The Porsche's manufacturer's suggested retail price as equipped here: \$168,225.

Is that lofty price a guarantee of good performance during mile-high trailer boating? We set out with a Malibu Wakesetter in tow to find out.







TRUST FUND

Despite the Cayenne's impressive power, we have to admit holding a certain suspicion, because towing requires more than just big muscles and a fancy hood ornament — it also requires a broad torque spread, excellent chassis dynamics and a beefy hitch. Fortunately the Cayenne Turbo S is rated to tow 7,716 pounds. We would see about the rest.

To test the theory of whether some Euro-luxe vehicle can match American truck muscle, we devised a rigorous test: 400 miles of broiling interstate in the summer followed by a brutal 50-mile mountain climb to a suitably luxurious destination. Known as the "Jewel of the High Sierras," Lake Tahoe is the country's second-deepest lake, with its icy waters plunging 1,645 feet and lakefront properties ranging up to \$20 million. It is most definitely an über-destination to go with this über-Porsche.

Malibu provided the perfect luxury/ performance companion in the 3,500pound Wakesetter 21 VLX. Besides three Monsoon V-8 options up to 555 supercharged ponies, the VLX also packs an impressive suite of electronics, including Malibu Touch Command (MTC) computerized presets for the Power Wedge, ballast tanks and Surf Gate that make toggling between specialty wakes easy. It also seats 14 people, has an onboard heater and boasts a Rockford sound system that'll blow you overboard. The manufacturer's suggested retail price on our 350 hp version, including a tandem-axle Boatmate trailer, was \$110,072, bringing the Porsche/Malibu total to \$278,297. Clearly, our luxury test tow package represents hedgefund-profits territory.

INDEXED AVERAGE

After hitching up the Malibu at Tilly's Marine in Ventura, California, we were ready to discover whether this jewel of an SUV was merely prissy or actually potent. Turns out the impressive horsepower is mirrored by 553 foot-pounds of torque, which puts the Cayenne Turbo S into the hellcat ranks when you put your right foot down. Acceleration is breathtaking at a Porsche-certified 4.3 seconds from 0 to 60 mph. Even with 5,400 pounds'



Our Cayenne test truck more closely resembles a late-model 911 than it does the first 1948 Porsche Type 356, with its dual-carb, air-cooled, pushrod flat four. Instead, the Cayenne boasts 550 hp from its twin turbo fuel-injected engine. The Cayenne also has high-tech features like acoustic glass.



WETIMED IT AT 9.45 SECONDS FROM 0 TO 60 MPH. Porsche and trailer feature eight disc brakes. Often overlooked, stopping power is actually a critical towing safety feature, and with this capability the entire 10,200-pound Porsche/Malibu/ Boatmate package rewarded us with exceptional brake response, stopping

> As a disciple of crew-cab pickups, one additional reservation I had was how to pack four family members into the Cayenne for a 1,200-mile road trip. Whereas a big pickup would naturally have a Texas-size interior, I wasn't so sure about the Porsche. I needn't have worried. Every passenger in every seating position was complimentary of the contoured leather seating and other accommodations, including the giant

performance and pedal feel. Maybe

there is something to this über-towing?

panoramic glass roof, Bose surround sound and multizone climate controls.

Ride quality is also crucial for distance towing. The Porsche's active suspension management system was solid here too, with a push-button choice of comfort, normal or sport settings. We left the system on normal for most of the trip, as it provided fine ride quality without the vehicle ever feeling floaty or off-balance. Thanks in part to its optional acoustic glass, the Cayenne proved quiet inside, registering 67 decibels on the A-scale of our sound meter. The only demerit here was pervasive low-level tire and exhaust background noise.

So far the Porsche was excelling at towing capacity and power, stability and comfort. But what about fuel economy?

worth of Malibu and trailer in tow, it is impressive — we timed it at 9.45 seconds from 0 to 60 mph. And the eight-speed paddle-shift automatic was always quick and precise, a real delight.

So much for whether a pretty little import can tow a boat. Next on our list was whether this 15.9-foot-long car, with a wheelbase 4.6 feet shorter than that of a long-bed Dodge Ram crew-cab pickup, could haul a 211/2-foot boat on its tandem-axle trailer without getting sketchy when the road does. Our trip from the Los Angeles area north along furnace-hot Interstate 5 proved it could. The Cayenne's standard all-wheel drive, adjustable suspension and stability management all operated continuously and automatically.

The Cayenne and the trailer both have high-performance, low-profile tires, 21 inches for the Porsche and 18 inches for the trailer. The stiff sidewalls and wide footprint allow greater cornering forces, and so whether on the interstate or mountain roads, the entire package always felt poised and planted. Interestingly, altogether the









AFTER 400 MILES OF SUCCESSFUL HIGHWAY TOWING UNDER HOT CONDITIONS, WE WERE CONFIDENT THE CAYENNE WOULD EXCEL PULLING THE MALIBU OVER 7,387-FOOT ECHO SUMMIT ON THE WAY TO TAHOE. AND IT DID JUST THAT.

For the entire towing trip, including interstates, mountain roads and launching, it averaged 9.5 mpg. That's comparable to a full-size pickup towing a similar-size boat, although the Porsche required premium fuel compared with regular unleaded for many pickups — a 5 percent added hit. Despite the Cayenne's seemingly large 26.4-gallon fuel tank, we typically refilled before 200 miles, about 80 miles shorter than a large pickup with a 35-gallon fuel capacity. This required two fuel stops per driving day compared with just one for a pickup.

In the heat-soaked farm towns in California's Central Valley, the Porsche and Malibu stood out like Gucci shoes in a dirt-floor honky-tonk. But the Cayenne didn't mind the heat, easily dispatching

hundreds of miles of broiling pavement. In fact, the Porsche/Malibu/Boatmate package is so competent at speed that the 55 mph legal limit proved hard to obey. And the standard exterior mirrors, too narrow for a useful rear view, left us sitting ducks for a ticket. Accessory towing mirrors are recommended.

UPWARD TREND

After 400 miles of successful highway towing under hot conditions, we were confident the Cayenne would excel pulling the Malibu over 7,387-foot Echo Summit on the way to Tahoe. And it did just that, thanks to great handling and the twin turbos, which negated the usual altitude-caused performance loss. Truthfully, I've never had an easier and more confidence-inspiring run up that mountain with a boat in tow.

Finally glimpsing Tahoe's famous blue waters far below us was a great reward. And the transition from the Central Valley to the Tahoe basin was stark. Instead of triple-digit temperatures in the flatlands, Tahoe was in the 70s. Pine and cedar trees replaced grain fields and tumbleweeds, crows and sparrows ceded to eagles and jays, and Circle K truck stops were replaced by the Tahoe Resource Conservation District boatinspection station. To stem the spread of invasive mussels in the lake, all boats must have this inspection prior to launching. That's good, but it was neither cheap nor quick, requiring \$75 and over





an hour to inspect the never-used Malibu.

This was just one of many reminders that Tahoe is as pricy as it is pretty, with the private launch ramps we explored charging \$25 to \$45 per round trip and mooring buoys, if you could find one, quoted at \$100 a day in season. We settled on Obexer's Boat Co., a 104-year-old family establishment on the woodsy west shore, which featured a friendly staff and casual launch environment. And while



the Porsche and Malibu were a decidedly premium combo, we also favored the folksy 1940s-era Tahoma Lodge under the pines rather than a glittery high-rise hotel.

Although its famed clarity has declined and despite worrisome algae and mussel problems, Tahoe is still a stupendous boating experience — as long as you don't mind the cold water, which ranged from 58 to 64 degrees during our visit. On a calm day, wakeboarding and wakesurfing here is a surreal experience. You can quickly find deep water, which averages nearly 1,000 feet, leap off the swim step, and stare right into the inky abyss. Then yell "Hit it!" and shred right over it.

Although Malibu's optional 410 hp or supercharged 555 hp Monsoon engines would have more giddyap at Tahoe's 6,225-foot elevation, the standard 350-horse engine sped us out to the choice water quickly enough. And when the occasional swells came our way, the well-developed hull cut through them with minimal chaos.

Thanks to the computerized MTC system, when you're in ski, wake or surf mode, the Malibu does everything but drive itself, giving all riders the best wake for their best shot at a best trick. And as a lifelong surfer I was thrilled with the endless glassy wake, complete with a hollow curl on top. Now, most millennials would probably want to listen to dubstep on the huge rear-facing sound cannons while practicing cutbacks and aerials, but not me. Instead, I am proud to claim the first-ever wakesurfing session to 500 fantabulous watts of Herman's Hermits. To me, that goes well beyond mere über-luxury.



RESOURCES

Porsche Cayenne Turbo S porsche.com/usa/models/ cayenne

Malibu Wakesetter 21 VLX malibuboats.com

Tahoe boat inspection tahoeboatinspections .com/wp-content/uploads /2014/04/Watercraft_ Inspection_Fees_2014.pdf





Dueling Consoles

he offshore boat market is shifting. For a number of saltwater fishing-boat builders, dual-console (DC) models now represent their fastest growing sales category. It seems that many boat buyers, who might have traditionally opted for more hard-core fishing machines, are now gravitating to DCs.

This largely extends from the evolution of the center-console (CC) over the past several years. A number of models have transitioned from dedicated angling platforms to softer versions that are more about socializing and comfort.

Center-Console vs. Dual Console: Which Is Right for You? BY JIM HENDRICKS For decades, CCs ranging from 18 to 30 feet or more in length have dominated the saltwater fishing market. In areas such as Florida and the upper Gulf of Mexico, where warm temperatures preclude the need for much weather protection, this outboard-powered design proves perfect for serious ocean anglers.

Center-consoles have deep-V hulls for a smooth ride when chasing offshore targets and multiple engines for getting out there and back quickly, and the relatively open decks let you move and fish virtually anywhere along the rail.

Yet not everyone goes boating in salt water just to fish. Many CC owners these days also cruise, entertain and enjoy water sports, as well as fish. On any given weekend when the weather's nice, you'll almost certainly see center-consoles hosting guests while tubing, rafting up, hanging out at the local sandbar or motoring to a waterfront eatery.

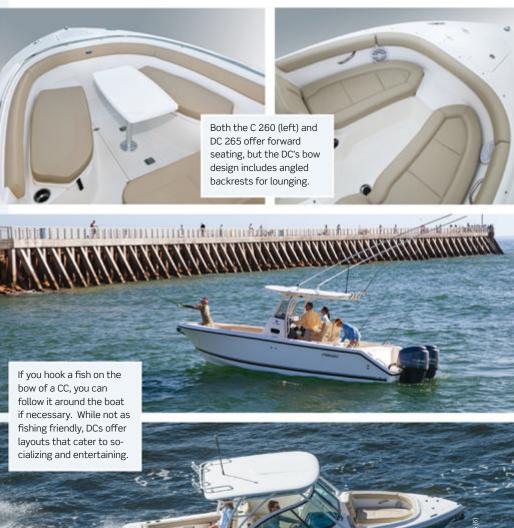
Recognizing the trend, builders began designing center-consoles with more creature comforts, such as forward lounges, transom seating, deluxe head compartments and galleys with stoves, freshwater faucets and sinks. The luxury centerconsole was born.

No matter how posh, however, CCs are still primarily fishing platforms. So some builders took a fresh approach — combining twin consoles and an open bow with the proven deep-V running surfaces from CCs. The offshore dual console was born. While some niche DCs existed prior, the design has really taken off in the last few years. Yet, does this mean a DC is right for you?

To help you decide which style might be the best choice, let's look at seven points of comparison, using two outstanding models from Pursuit Boats — the C 260 Center Console and the DC 265 Dual Console, both based on the same 25-foot-10-inch offshore-capable hull.

And in case you're wondering, both offer enclosed head compartments with permanent toilets, sinks and freshwater faucets inside the front-opening console of the C 260 and inside the port console of the DC 265, which opens to the bridge deck.





Family Ties

Here are three examples of other companies that make both center-console and dual-console models as sister ships.



Base price: \$172,646 with twin Mercury 225 Verados

270 VANTAGE

Base price: \$150,399 with twin Mercury 225 Verados



230CC

Base price: \$104,999 with single Yamaha F300

230DC

Base price: \$110,475 with single Yamaha F300



Base price: \$212,045 with twin Yamaha F250s and Helm Master

FREEDOM 285

Base price: \$219,745 with twin Yamaha F250s and Helm Master

EXHIBIT A: Pursuit C 260 Center-Console

Take a Walk

The deck layout of the C 260, like those of nearly all CCs, allow you to move 360 degrees around the interior, offering unfettered access along the rail. This is a great advantage when fishing, especially when following a speedy prey around the boat. With a DC, it is virtually impossible to fight a fish down the rail.

Dock Line Logic

All-around rail access of the CC design simplifies the task of manning lines. You can stand anywhere along the gunwale, catch a line and walk it either forward or astern to cleat it off. With a DC design, you just can't do this. Also, the windshields on some DCs interfere with access to the cleats amidships.

Sit Back

CCs allow for a helm farther aft than on a DC. And since a boat is akin to a lever with the fulcrum at the transom while underway, the farther aft you are, the less up and down movement you experience. Locating the helm farther forward, as with a DC, results in a rougher ride for those seated at the consoles. Remember this if you plan to tackle choppy seas on a regular basis.

Mo'Bait

CCs such as the C 260 feature a livewell — 30 gallons in this case — within the helm seating module. Most DCs can't match the live-bait capacity of CCs, but Pursuit's DC 265 does have a 19-gallon livewell in the transom.

Side Stowage

With unobstructed access to the inwales, a CC by its very nature offers more room under the gunwales for racks for rods, gaffs and deck brushes, as well as stowage lockers. The twin consoles and seating modules along both sides of a DC can spell less stowage space along the inwales.

Electronics Room

The nature of the CC allows for a larger helm panel and more room atop the console. The center-console itself is also usually taller than a DC helm. This means you can fit larger and/or more displays on a CC, whether flush-mounted on the panel or bracket-mounted on top of the console. The DC's angled windshield may preclude electronics atop the helm console.

Mucho Macho

If a CC is a pickup truck, a DC is more like a luxury SUV (though some might say minivan). In our minds, the CC—even in its more luxurious iterations—is definitely the more macho of the two. So if you're out to impress your fishing buddies, go for the CC. But if pleasing the family takes precedence, check out Exhibit B.

LENGTH: 25'10" BEAM: 8'9"

DRAFT: 1'8" (motors up)

DISPLACEMENT (APPROX.): 5,550 lb. (with single F350)

TRANSOM DEADRISE: 21 degrees

BRIDGE CLEARANCE: 8'0" (with hardtop)

MAX CABIN HEADROOM: 5'10"

FUEL CAPACITY: 139 gal.

MAX HORSEPOWER: 400

BASE PRICE: \$145,015 with twin Yamaha F200 I-4s

PERFORMANCE (with twin Yamaha F200 I-4 outboards)
BEST MILES PER GALLON: 2.49 @ 3,500 rpm/28.1 mph
TOP SPEED: 52 mph @ 6,000 rpm

PURSUIT BOATS Fort Pierce, Florida; 772-465-6006; pursuitboats.com

Forward Thinking

Protect Yourself

This is where DCs shine. With the middle panel and walkway door closed, the full-width, temperedglass windshield offers protection for everyone abaft the two consoles. The wraparound design also knocks down spray from the side — an advantage a CC cannot boast without additional clear side curtains.

Take a Seat

With seats for two on the bridge deck and an aft-facing seat on the port side, the DC 265 also has fold-out benches in the transom and port side that create L-shaped seating for four more in the aft cockpit. Two bow loungers offer room for another four more, bringing the total seats to 11 - two more than the C 260 and in a more social configuration.

LENGTH: 25'10"

BEAM: 8'9"

DRAFT: 1'7" (motors up)

DISPLACEMENT (APPROX.): 5,650 lb. (with single F350)

TRANSOM DEADRISE: 21 degrees

BRIDGE CLEARANCE: 7'6" (with hardtop)

MAX CABIN HEADROOM: 4'7"

FUEL CAPACITY: 139 gal.

MAX HORSEPOWER: 400

BASE PRICE: \$148,035 with twin Yamaha F200 I-4s

PERFORMANCE (with twin Yamaha F200 I-4 outboards) BEST MILES PER GALLON: 2.57 @ 3,500 rpm/27.6 mph

TOP SPEED: 51.4 mph @ 5,900 rpm

Family Value

Marketing experts say we buy cars based largely on which model matches our self-image. That being the case, if you're leaning toward a DC, it could well be because you see yourself as a family man, albeit a rugged one who also likes to venture offshore to catch blue-water game fish (with your family, of course).

Now You're Cookin'

DC designs lend themselves well to an open-air galley, often abaft the helm seat. The DC 265, for example, includes a covered food-prep area with a sink and freshwater faucet, but some DC models also offer cooking ranges and refrigerator/freezers. Some CCs offer these amenities abaft the seating module, but primarily on models of 35 feet or more.

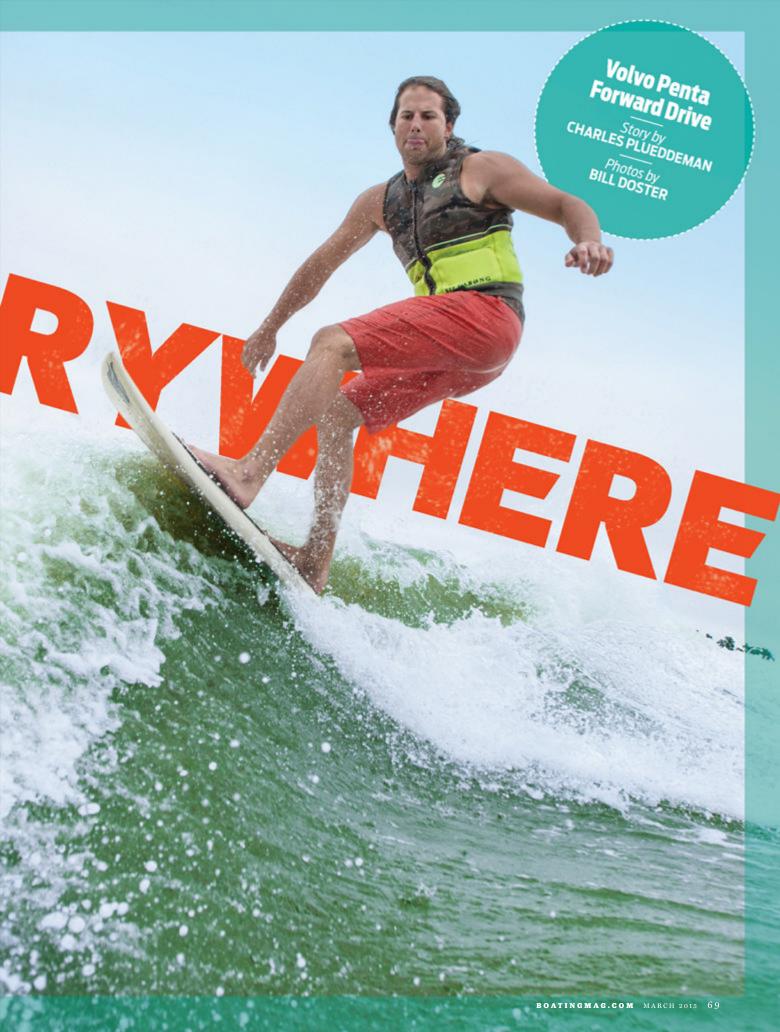
Shadv Deal

The hardtops on DCs tend to be wider - extending nearly the full width of the boat — and sometimes longer, and so offer more shade than hardtops or fabric T-tops on CC models. Keep this in mind if you like to spend long, hot summer days on the water. At some point, your guests will want to get out of the sun.

Overnight Package

If you're considering an occasional overnight trip, a DC layout is better suited than a CC's to spending the evening on board. While not as ideal as a cruiser, a DC can be fitted with custom camper-canvas to enclose the aft cockpit and keep out wind and moisture. Put an air mattress or beanbag on the deck and bundle up in a blanket or sleeping bag.







scratch to throw down for an inboard tow boat, may be an option for the bourgeoisie boating family in a new generation of surf-ready runabouts powered by the patented Forward Drive. Surf's up!

The Forward Drive was developed with the input of boatbuilders like Bryant Boats, which invited us to demo the prototype on its 233X model at the Volvo Penta facility. According to Volvo Penta, boatbuilders Regal, Cobalt, Four Winns, Monterey and Chaparral have also participated in Forward Drive testing and may offer it on new or modified boat models this year. Now, just as bolting a tower to the gunwales of a bowrider doesn't exactly make it a pro-tour wakeboard boat, the Forward Drive and some ballast may not turn that same boat into a primo surf sled. But I bet it could be good enough for the weekend duffer and his kids to have a blast learning to surf — without blowing the college fund.

WAKE'S UP!

Over the years, the wakesurf premise has stayed the same — get up on the board while holding a short ski line, find the sweet spot in the wake, and toss the line back into the boat. At the right boat speed, the wake has enough energy to keep board and rider moving forward. Fresh interest in wakesurfing started eight or 10 years ago, enabled by the development of the wakeboarding tow boat, an inboard with water ballast designed to make a very large wake. Slow that boat down to 10 or 12 mph, and a wake with surfable energy is created right off the transom. With hints of a recession looming and wakeboarding perhaps peaking in popularity, the

THE GREEN ROOM

We were granted official clout, so we didn't have to scale the razor wire surrounding the top-secret Volvo Penta Test Center on Chesapeake Bay to see a prototype of the Forward Drive, a new forward-facing dual-prop drive designed expressly for wakesurfing. The pulling, or "tractor," props of the Forward Drive are tucked under the boat and about 27 inches farther forward than the props of a Duoprop sterndrive, and thus 27 inches farther away from a wakesurfer riding the curl. Suddenly wakesurfing, previously the privilege of those with the significant



WAKESURFING GENESIS

Poke around on the Internet and you can find black-and-white newsreel footage from the early 1960s of longboard riders surfing behind boats. The late water-ski and wakeboard innovator Herb O'Brien and his brother, Ed, surfed behind the family Chris-Craft on Lake Sammamish, Washington, in 1954 on a small board designed by his father, a Boeing engineer. During his misspent youth, our own editorin-chief recalls surfing Long Island waters on the monster wake thrown by a borrowed Pacemaker.

tow-sports industry threw product and marketing energy behind wakesurfing, hoping it could be The Next Big Thing. Dedicated wakesurfing boards were developed, and boatbuilders started adding trim tabs and other details to tow boats to enhance the shape of the wake at surf speed. A dialed-in wakesurfer can ride the wave until the boat runs out of gas, and surfing doesn't hurt when you fall off, knee ligaments stay intact, and a buddy can film you from the boat.

Looks like big fun if you have an inboard tow boat with the prop located well under the hull. Surfing 3 feet behind a boat powered by a sterndrive or an outboard, however, invites catastrophe, some say, because of the close proximity of whirling propeller to surf-rider appendages. And so the inboard/outboard crowd has been dissuaded from the surf party. The Forward Drive allows builders to create a runabout that's not just a dedicated wakesurfer.

The Forward Drive addresses the prop location issue. It has a lower-unit design that evolves from the forwardfacing Volvo Penta IPS inboard drive,

With the Forward Drive. the propellers move from an exposed position beyond the transom to underneath the hull, safely away from a surfer's exposed appendages. The exhaust also exits under the water, keeping it away from the rider's face. a system that just celebrated its 10th anniversary. It's a little smaller than the IPS 1, and it's cast in aluminum rather than bronze. For wakesurfers, the Forward Drive offers two key benefits. The props are moved under the boat to a position close to the location of an inboard prop, at a respectable distance from the surfer just behind the boat. The new drive also dumps all of its exhaust



underwater, unlike most inboards and

even the Duoprop, which vents some



FORWARD THINKING **BOATBUILDERS**

While Bryant served as our entrée to this new technology, helped arrange the backstage pass at the Volvo Penta test facility, and offered up its



boat and expert surfer Ben Dorton for his expertise and to provide a photo opportunity, a number of boatbuilders are working on the development of the Forward Drive. These include:

Bryant, Cobalt, Four Winns, Monterey and **Regal**. For expanded coverage of these boatbuilders' plans for the Forward Drive, scan the tag or visit boatingmag .com/forwarddrive.

exhaust at surface level through the antiventilation plate. This eliminates exhaust fumes from the surfer's environment directly behind the boat.

Unlike an inboard, the Forward Drive is trimmable and turnable and provides directional thrust for steering, performance and efficiency, but here's where we "bump" into a limitation of this design — the Forward Drive cannot be trimmed above the boat bottom. In fact, at max trim the drive is about 12 inches below the bottom of the boat. It incorporates two proven sterndrive features to protect against damage due to an underwater collision — hydraulic kick-up and a "drive saver," but a boat equipped with Forward Drive is always going to draw more water than a sterndrive. Like many inboard-powered boats, it will likely require a trailer that carries the boat higher above the ground.

Volvo intends to offer the Forward Drive with gasoline engines from 200 to 430 hp but expects the prime application will be from 300 to 430 hp. Specific props have been designed for the drive, to be designated the K Series propsets. Volvo said the Forward Drive will cost

NO REPLACEMENT FOR DISPLACEMENT

As mentioned, the Forward Drive I got to sample was very much a prototype. We started our demo in surf mode,

"At surf speed the boat is not on plane, and rather than creating a wake that dissipates as it spreads outward, the wake swells and rolls over itself, just like a wave on the ocean. The dual props of the **Forward Drive eliminate the** list caused by prop torque in an inboard, so the wake is symmetrical."

with the Bryant 233X laden with 1,700 pounds of water ballast plus some lead and six people. Ben Dorton, the 25-year-old Bryant brand manager, was our designated surfer. Dorton grew up during the wakeboard boom, when his dad, John, was the president of MasterCraft. John Dorton acquired controlling interest in Bryant in 2012, and Ben is a partner in the venture. Ben won a national championship with the University of Tennessee wakeboard team in 2013, and when he picked me up at the airport, the back seat of his F-150 held a wakeboard, a surfboard and a knee brace, a typical collection of gear for a wake-sports athlete. I asked Dorton what defined a good surf wake.

"At surf speed the boat is not on plane, and rather than creating a wake that dissipates as it spreads outward, the wake swells and rolls over itself, just like a wave on the ocean," Dorton said. "The dual props of the Forward Drive eliminate the list caused by prop torque in an inboard, so the wake is symmetrical, and you can ride either side without ballast or tab adjustment."

A big wake is all about displacement, and with 19 degrees of deadrise at the transom, the Bryant starts out making a bigger hole in the water than a

flat-bottom inboard tow boat's. While the angle of the inboard prop shaft is always lifting that hull, the Forward Drive can be trimmed to press the stern deeper into the water.

"I think with Forward Drive we can ultimately make a surf wake that's as good as the smaller inboard boats'," Dorton said. "The goal is to offer a boat that you can surf behind confidently, with a reliable wake that's lots of fun."

To gauge its performance, we ditched the ballast and drove the Bryant like the runabout it is. Volvo said the Forward Drive will offer speed and economy comparable to a Duoprop sterndrive's, with other advantages. Because the props are deep and away from exhaust, reverse thrust is outstanding, and it's impossible to blow out in a turn. In fact, the Bryant was able to cut hard 180-degree turns like an inboard does.

To enhance the surf wake of the 233X, Bryant has already modified the strakes and the trailing edge of the hull. The boat we ran was equipped with standard trim tabs, but Bryant will soon have new tabs formed to further enhance wake shape. The 233X is priced at \$75,000 to \$85,000, the premium end of the sterndrive market. The surfin' safari could just be starting.



Trim tabs can be used to enhance the wake with the push of a button at the helm.
When used, they can push the bow up or down or make the boat list to one side.



Electronics

Lowrance HDS Gen3

Two schools of thought exist when it comes to multifunction displays (MFDs): 1) offer a basic MFD with optional plug-and-play modules, or 2) include numerous

functions in a single unit. - Jim Hendricks

The new HDS Gen3 from Lowrance (lowrance .com) reflects the latter. Available in 7-. 9- and 12-inch models, these MFDs combine lightning-fast processors with advanced sonar and chart-plotter technologies. Icon-driven scrolling menus offer access to built-in functions like StructureScan HD and CHIRP sonar, as well as an advanced GPS/ chart plotter with built-in



You can also run Insight HD and Pro and Insight Genesis, as well as C-MAP MAX-N+ and

Navionics electronic charts. Wireless connectivity lets you directly upload mapping and software updates. You can add modules such as Lowrance Broadband radar, SonicHub, SiriusXM, Class B AIS, DSC VHF and Lowrance Outboard Pilot.

Lowrance has included a full keyboard to augment the touchscreen display, giving captains the choice, recognizing that buttons are sometimes easier to use in rough sea conditions than are touch screens.

The displays on the HDS Gen3 models offer greater sharpness and better viewing than with previous models, particularly in situations in which there's over-the-shoulder glare from sunlight. Each is designed to fit the mounting brackets and flush-mount footprints of the previous-generation models, making the upgrade easy. Manufacturer's suggested retail prices range from \$1,199 for the HDS-7 Gen3 to \$3,199 for the HDS-12 Gen3.



Does the Automatic Identification System (AIS) replace radar?

With an AIS receiver, a triangle appears on your navigation screen that indicates the position of any vessel broadcasting an AIS signal. You can access the name of the vessel, its speed, heading and rate of turn, as well as its length overall, beam and draft.

If your boat is equipped with an AIS transceiver (which receives and sends AIS signals), the same type of information about your boat will be accessible to other AIS-equipped boats. However, AIS should not be considered a radar replacement, as many boats do not broadcast AIS signals, nor do many other



obstructions, such as breakwaters. Radar, on the other hand, sees just about everything (except an AIS-equipped boat behind a point of land, ship or jetty). Use AIS to augment, rather than replace, your marine radar. - Ken Englert

ASK KEN ONLINE

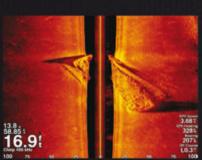
For more exclusive electronics content, visit boatingmag.com/askken.

Insight USA charts. Even the

GPS antenna is built in.

Side-Looking for Fish
Five marine electronics brands offer side-looking sonar: Garmin, Humminbird, Lowrance, Raymarine and Simrad. I've found each useful for quickly finding schools of bait, reefs and wrecks — elements that attract game fish.

Side-looking sonar covers a lot of water. StructureScan HD SideScan in the Lowrance HDS Gen3 (featured above) covers up



to 300 feet on either side of the boat. Raymarine's CP200 CHIRP SideVision Sonar covers up to 600 feet on each side, and Garmin's CHIRP SideVü blasts out 750 feet abeam of the boat with the proper transducer, covering a swath of 1,500 feet — that adds up to five football fields.

Side-looking images appear almost lifelike, making it easy to recognize objects such as wrecks or rock piles, though bait schools appear as a group of small, light dots. Like a medical ultrasound's, all images are produced in shades of a single hue. — J.H.

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BOATINGLAB

BY RANDY VANCE

Do you want more Wi-Fi range for your boat? Well, you're the client, and to get what you want, you need to create a bridge to your local network.

Most modern marinas boast a powerful local network using commercial routers and a high-gain antenna, such as the Shakespeare 5248, but if you're moored at the network's outskirts, you may have a problem. Or if you're one of those lucky backyard boaters, getting your house Wi-Fi to the dock isn't easy either. We tested these devices to solve your problems.







Netgear

EX6100 Range Extender

\$80: AMAZON.COM

This dual-band Wi-Fi bridge works on both a 2.4 GHz and 5G router. Plug it into any 110-volt outlet between your router and the areas of weak signals. We'd suggest plugging it into an outdoor outlet, near a window, to bridge the Wi-Fi signal to a "backyard boat" in a nearby waterway. The device is not waterproof.

APPLICATION: Install between the outer range of a household router and the dockside Wi-Fi client receiver. It can also be connected to the Rogue Wave Ethernet cable, which enables wireless connectivity.

CONNECTING: Easy to connect, requiring no technical service, the device's setup depended upon it being located near the Wi-Fi router. Then, it retained the setup information as we disconnected and booted it up outdoors, from 30 feet away.

TECHNICAL SUPPORT: Speaking to a human technical support agent was preceded by five minutes of robo-talk during which I registered my product. One minute later, I was speaking with a technical assistant. A couple of technical questions were quickly answered; Netgear is quickly supporting its product.

OVERLAND TEST RANGE: 651 feet

NOTES: This device would be ideal for bridging a signal to a backyard boat.

The Wirie

The Wirie AP+

\$399 (WI-FI ONLY); THEWIRIE.COM

Advertised to reach over miles, it allows connection of any number of Wi-Fi-enabled devices and burns only 500 milliamperes (mA) at 12 volts, meaning it can run 24/7 without draining house batteries. Its newer transmitter is not as powerful as the Rogue Wave's, but it supports the newer, faster N network. It is waterproof and corrosion resistant.

APPLICATION: Install on vessel mast to receive shore-based Wi-Fi signals.

CONNECTING: It took only a few moments to assemble the device and then only 15 minutes to connect it to 12-volt power following the two-page instructions. We named our system, set a password and then disconnected from power and the local area network to mount the device where we wanted it. It booted up and connected automatically every time thereafter.

TECHNICAL SUPPORT: We didn't need technical service since our hookup was easy, but we called anyway and left an anonymous message. The call was returned less than 10 minutes later by the company owner and engineer.

OVERLAND TEST RANGE: 740 feet

NOTES: The system is powerful and easy to set up. Technical support was fast: the answers to our questions were clear and useful.

Wave WiFi

Rogue Wave

\$350 (WI-FI ONLY); WAVEWIFI.COM

The Rogue Wave has been around longer than other devices and its design and construction are sleeker, but it does not have an internal local Wi-Fi network like The Wirie AP+ does. Its transmitter is more powerful than The Wirie AP+'s but does not support the faster N network system. It's waterproof and corrosion resistant.

APPLICATION: Install on vessel mast to receive shore-based Wi-Fi signals.

CONNECTING: Like The Wirie AP+, our device connected quickly and easily once we resolved local hardware issues unrelated to the device. Simple directions enabled us to quickly name the device and enter local network passwords. After disconnecting the device, it rebooted and connected automatically.

TECHNICAL SUPPORT: Technical support was instantaneous. The same people who take Rogue Wave orders solve your installation problems. But, as noted, we didn't have any.

OVERLAND TEST RANGE: 1,046 feet

NOTES: It gave us our longest range. Connecting the device's Ethernet to a wireless router or the Netgear Wi-Fi extender's Ethernet port creates a powerful long-range network on board. Be sure to use the included silicone gasket to seal the Ethernet cable port, or use silicone.

HOW WE TESTED

CONNECTING

We took each system out of the box and studied the manual to make Wi-Fi connections. Then we followed directions to connect them to Wi-Fi, while keeping an eye on the clock.

TECHNICAL SUPPORT

We contacted each technical support service, gauging the ease with which we received answers to our questions.

OVERLAND TEST RANGE

Range is completely dependent on line of sight and uncontrollable variables like radio interference and atmospheric conditions at the moment. A device may reach out 10 miles one day and only 1,000 feet in other conditions. We moved away from our home Wi-Fi hub, measuring the distance we

could receive Wi-Fi signals as we moved down the street. Our home router was behind a concrete block wall. Because these were not line-of-sight distances, as one would have on open water, we didn't expect our devices to reach their potential range. But our test made a good relative gauge of how well each device pulls in a signal.

FINAL NOTE

Though our tests gave us impressive neighborhood range, and convinced us these router bridges were well worth the investment, we didn't experience the full benefit that we might find on open water in direct line of sight of a Wi-Fi signal. Both The Wirie AP+ and Rogue Wave users boast working Wi-Fi ranges of miles, not fractions of miles.



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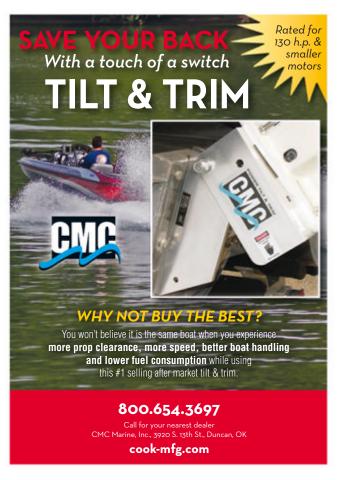
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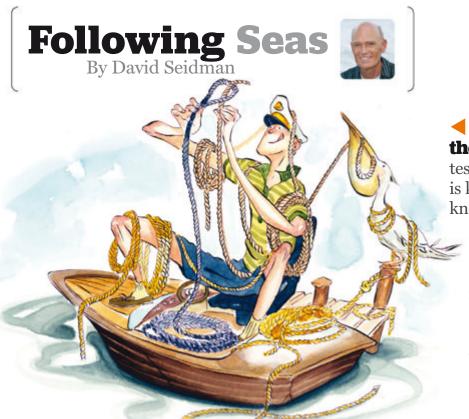




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O YOU KNOW THE OLD SAYING "GIVE A MAN enough rope and he'll hang himself"? Give me enough rope and I'll have an entertaining afternoon. Actually, it's more likely that if I give you enough rope you'll hang yourself out of boredom. I bet the only knots you know are for a cleat and something to wrap around a piling. If you're into fishing, maybe you'll add in a Bimini twist.

Sure, you know that you need to learn a few more knots, but they're soooo 19th century, confusing and way too hard to learn. Isn't there an app for this stuff? Sorry, but no. (Although there's an app to learn to tie them called Grog's Animated Knots: \$4.99 in the iTunes store.) While electronics have taken over almost everything on board, you're still going to have to deal with ropes. Which isn't so bad. In fact, it opens up interesting opportunities.

Granted, I say this from the perspective of a total boat geek, a member in good standing of the International Guild of Knot Tyers (yes, it's for real) and a student of topology — a branch of math that studies knots within three-dimensional Euclidean space (take that Stephen Hawking).

So who needs more knots? You do. Because there are traditions of the sea that have stood the test of time, and one of them is knowing how to tie the right knot for a job. If you can't, you're not a sailor — a designation that has nothing to do with the kind of boat you operate.

If you knew how to tie a trucker's hitch you'd be able to securely lash things down, like your dinghy. With a sheet bend you could join two lines — to make one long line — so they won't come apart under strain but are still easily untied. A rolling hitch lets you tie on to the middle of a line, such as an anchor line, so two people can pull at the same time.

There are traditions of **the sea** that have stood the test of time, and one of them is knowing how to tie the right knot for a job.

> More? A constrictor knot can be used as an emergency replacement for a hose clamp or a tourniquet. If you could quickly tie a Spanish bowline you'd be able to haul an unconscious crew member back on board. Tie a few lineman's loops in a long length of rope and you've got an instant rope ladder. A heaving line knot puts weight at the end of a line so it can be thrown a long distance to another boat or someone on a dock. And then there's the jug

> > sling, which is perfect for tying to a wine bottle so it can chill overboard.

There are a few hundred more, but there's one I'm particularly fond of because I almost invented it: the adjustable eye splice. After thousands of years of knotting you'd figure we'd have discovered them all. And when I came up with my knot in the early '60s, I thought so too. Still, after finding no mention of anything like it I thought I'd done it. But then, while looking through a book on witches' knots (who knew?), I found a drawing of a "running eye splice on

the byte." Here was my knot, already recorded into history in 1714.

While it isn't as strong as a true eye splice, it's useful and a lot easier to tie. (Learn how at boatingmag .com/isplice.) After all this, I hope that when I see you outside the inlet, you'll at least be able to tie a proper hangman's noose. Hey, if you're going to do it, at least do it right. Show some pride, sailor.



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